BLAST Basic Local Alignment Search Tool

•

Edit and Resubmit Save Search Strategies Formatting options Download

Nucleotide Sequence (11111 letters)

Results for: ||c||24839 None(11111bp) |

Your BLAST job specified more than one input sequence. This box lets you choose which input sequence to show BLAST results for.

Query ID

| Icl|24839

Description

None

Molecule type

nucleic acid

Query Length

11111 SEQ ID NO: 13

Database Name

nr

Description

All GenBank+EMBL+DDBJ+PDB sequences (but no EST, STS, GSS,environmental samples or phase 0, 1 or 2 HTGS sequences)

Program

BLASTN 2.2.19+ Citation

Reference

Zheng Zhang, Scott Schwartz, Lukas Wagner, and Webb Miller (2000), "A greedy algorithm for aligning DNA sequences", J Comput Biol 2000; 7(1-2):203-14.

Other reports: Search Summary [Taxonomy reports] [Distance free of results]

Search Parameters

Program	blastn
Query range	397-1772
Word size	28
Expect value	10
Hitlist size	100
Match/Mismatch scores	1,-2
Gapcosts	0,0
Low Complexity Filter	Yes
Filter string	L;m;
Genetic Code	1

Database

Posted date Nov 16, 2008 5:48 PM

Number of letters 259,029,644 Number of sequences 7,734,480 Entrez query none

Karlin-Altschul statistics

Params Ungapped Gapped

Lambda	1.33271	1.28
K	0.620991	0.46
Н	1.12409	0.85

Results Statistics

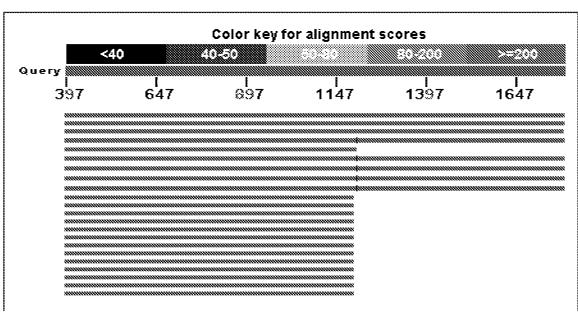
Length adjustment	33
Effective length of query	1343
Effective length of database	25143791804
Effective search space	33768112392772
Effective search space used	33768112392772

Graphic Summary

Distribution of 112 Blast Hits on the Query Sequence

.5.

An overview of the database sequences aligned to the query sequence is shown. The score of each alignment is indicated by one of five different colors, which divides the range of scores into five groups. Multiple alignments on the same database sequence are connected by a striped line. Mousing over a hit sequence causes the definition and score to be shown in the window at the top, clicking on a hit sequence takes the user to the associated alignments. New: This graphic is an overview of database sequences aligned to the query sequence. Alignments are color-coded by score, within one of five score ranges. Multiple alignments on the same database sequence are connected by a dashed line. Mousing over an alignment shows the alignment definition and score in the box at the top. Clicking an alignment displays the alignment detail.





Descriptions

Legend for links to other resources: UniGene GEO Gene Structure Map Viewer

	producing significant alignments: ders to sort columns)					
AB237837.1	Hepatitis C virus full-length replicon pFGR-JFH1 RNA, complete sequence	2542	2542	100%	0.0	100%
AB114136.1	Hepatitis C virus replicon pSGR-JFH1 gene for neomysin resistance gene product, hepatitis C virus nonstructural protein, complete cds	2542	2542	100%	0.0	100%
AF311318.1	Retroviral vector NIT, complete sequence	2390	2390	99%	0.0	97%
AB119282.1	Hepatitis C virus gene for Fusion protein, Feo, complete cds	1483	2532	100%	0.0	100%
DQ320121.1	Binary vector pBINPLUS/ARS, complete sequence	1483	1483	58%	0.0	100%
AJ242651.1	Hepatitis C virus replicon I377/NS2-3'UTR	1483	2532	100%	0.0	100%
AJ242654.1	Hepatitis C virus replicon I389/NS3-3'UTR	1483	2532	100%	0.0	100%
AJ242653.1	Hepatitis C virus replicon I389/NS2-3'UTR	1483	2532	100%	0.0	100%
AJ242652.1	Hepatitis C virus replicon I377/NS3-3'UTR	1483	2532	100%	0.0	100%
FJ155667.1	Allelic replacement vector pJC84, complete sequence	1471	1471	57%	0.0	100%
AB434475.1	Synthetic construct gfpuv5, aphA genes for green fluorescent protein UV5, kanamycin resistance, complete cds, clone: pT2	1471	1471	57%	0.0	100%
AB434474.1	Synthetic construct gfpuv5, aphA genes for green fluorescent protein UV5, kanamycin resistance, complete cds, clone: pT1	1471	1471	57%	0.0	100%
AB434472.1	Synthetic construct aphA, pyrE, gfpuv5 genes for kanamycin resistance, orotate phosphoribosyltransferase, green fluorescent protein UV5, complete cds, clone: OSU12-pyrE		1471	57%	0.0	100%
AB293446.1	Saccharomyces cerevisiae gene for aquaporin Aqy1, complete cds, clone: COS5	1471	1471	57%	0.0	100%
AB293445.1	Saccharomyces cerevisiae gene for aquaporin Aqyl, complete cds, clone: COS4	1471	1471	57%	0.0	100%
FM162567.1	Trypanosoma brucei Lister 427 surface glycoprotein expression site BES2/TAR129, from bloodstream	1471	1471	57%	0.0	100%
EU491017.1	Suicide vector pEX18Km-pheS, complete sequence	1471	1471	57%	0.0	100%
EU232662.1	Cloning vector pVMGCRT85, complete sequence	1471	1471	57%	0.0	100%
EU232661.1	Cloning vector pVMG-TnpR, complete sequence	1471	1471	57%	0.0	100%
AB366441.1	Salmonella enterica subsp. enterica serovar Dublin plasmid pMAK2 DNA, complete genome, strain: L-789	1471	1471	57%	0.0	100%
EU047752.1	Cloning vector pDC8, complete sequence		2177	57%	0.0	100%
EU024548.1	Cloning vector pCPP5250, complete sequence	1471	1471	57%	0.0	100%
EU024546.1	Cloning vector pCPP5702, complete sequence	1471	1471	57%	0.0	100%
EF437956.1	Expression vector pcDNA3-AQP4f, complete sequence	1471	1471	57%	0.0	100%
EF437953.1	Expression vector pcDNA3-AQP4e, complete sequence	1471	1471	57%	0.0	100%
EF437951.1	Expression vector pcDNA3-AQP4d, complete sequence	1471	1471	57%	0.0	100%
EF437950.1		1471	1471	57%	0.0	100%

Expression vector pcDNA3-K-AQP4d, complete sequence

	sequence					
CP000744.1	Pseudomonas aeruginosa PA7, complete genome	1471	1471	57%	0.0	100%
AY667410.1	Shuttle cosmid vector pHZ1358, complete sequence	1471	1471	57%	0.0	100%
AM711972.1	Transposon mutagenesis vector pMiET	1471	1471	57%	0.0	100%
EF550208.1	Cloning vector pcDNA3.1+PA, complete sequence	1471	1471	57%	0.0	100%
EF192606.1	Cloning vector pBEO210, complete sequence	1471	1471	57%	0.0	100%
EF028675.1	Cloning vector pDV-NTAP-CYFP, complete sequence	1471	1471	57%	0.0	100%
EF028674.1	Cloning vector pDV-NTAP-CGFP, complete sequence		1471		0.0	100%
EF028673.1	Cloning vector pDV-CYFP-CTAP, complete sequence	1471	1471	57%	0.0	100%
EF028672.1	Cloning vector pDV-CGFP-CTAP, complete sequence	1471	1471	57%	0.0	100%
EF028671.1	Cloning vector pDV-NYFP-CTAP, complete sequence	1471	1471	57%	0.0	100%
EF028670.1	Cloning vector pDV-NTAP-NYFP, complete sequence	1471	1471	57%	0.0	100%
EF028669.1	Cloning vector pDV-CTAP, complete sequence	1471	1471	57%	0.0	100%
EF028668.1	Cloning vector pDV-CYFP, complete sequence	1471	1471	57%	0.0	100%
EF028667.1	Cloning vector pDV-CGFP, complete sequence	1471	1471	57%	0.0	100%
EF028666.1	Cloning vector pDV-NTAP, complete sequence	1471	1471	57%	0.0	100%
EF028665.1	Cloning vector pDV-NYFP, complete sequence	1471	1471	57%	0.0	100%
EF028664.1	Cloning vector EXP5(+), complete sequence	1471	1471	57%	0.0	100%
EF028663.1	Cloning vector EXP4(+), complete sequence	1471	1471	57%	0.0	100%
EF177812.1	Expression vector pUNIV, complete sequence	1471	1471	57%	0.0	100%
EF030522.1	Inducible protein expression vector pReg Neo, complete sequence		1471		0.0	100%
AB255435.1	Escherichia coli plasmid pO86A1 DNA, complete sequence	1471	1471		0.0	100%
DQ886588.1	Expression vector pcDNA3-hFIX, complete sequence	1471	1471	57%	0.0	100%
DQ898181.1	Keratinocyte expression vector phPK14H, complete sequence		1471		0.0	100%
DQ823233.1	Expression vector mce4, complete sequence	1471	1471	57%	0.0	100%
DQ823232.1	Expression vector mce3, complete sequence	1471	1471	57%	0.0	100%
DQ823231.1	Expression vector mce2, complete sequence	1471	1471	57%	0.0	100%
DQ487156.1	Flexi vector pF5K CMV-neo, complete sequence	1471	1471	57%	0.0	100%
DQ487155.1	Flexi vector pF5A CMV-neo, complete sequence		1471	57%	0.0	100%
DQ487211.1	Flexi Vector pFN10A (ACT), complete sequence	1471	1471	57%	0.0	100%
DQ515893.1	HIS3/URA3 reporter vector pH3U3, complete sequence	1471	1471	57%	0.0	100%
DQ408591.1	Transposon mutagenesis vector pG18-STM, complete sequence		1471		0.0	100%
AY817672.1	SIV vector pCLN8, complete sequence	1471	1471	57%	0.0	100%
AY266291.1	Escherichia coli/Mycobacteria shuttle vector pGB9.2, complete sequence	1471	1471	57%	0.0	100%
AY613997.1	Cloning vector pSRalphaneoR, complete sequence	1471	3585	998	0.0	100%

AY613992.1	Cloning vector pSRalphaneo, complete sequence	1471	1471	57%	0.0	100%
AY286001.1	Cloning vector pHRE1-km, complete sequence	1471	1471	57%	0.0	100%
DQ059989.1	Cloning vector pSCR001, complete sequence	1471	1471	57%	0.0	100%
AY260554.1	Retrotransposon vector MEL/ELM, complete sequence	1471	2495	98%	0.0	100%
AY260553.1	Retrotransposon vector ELM 5, complete sequence	1471	2495	98%	0.0	100%
AY037297.1	Synthetic construct erythromycin resistance protein (erm) gene, partial cds; and streptomycin 3'-phosphotransferase (sph), bleomycin phosphotransferase (ble), neomycin phosphotransferase (nptII), and gentamycin resistance protein (aac) genes, complete cds	1471	1471	57%	0.0	100%
AF264696.2	Cloning vector pFB-ERV, complete sequence	1471	3430	99%	0.0	100%
DQ092437.1	Insertion vector pWSMK-T, complete sequence	1471	1471	57%	0.0	100%
AF504908.1	Cloning vector pBBRT, complete sequence	1471	1471	57%	0.0	100%
AY062236.1	Transformation vector pRLE6, complete sequence	1471	1471	57%	0.0	100%
AF416990.1	Synthetic construct plasmid pcDNA3-Rluc, complete sequence	1471	1471	57%	0.0	100%
AY181092.1	Synthetic construct S1 promoter-nptII gene- S3 terminator cassette		1471	57%	0.0	100%
AY159034.1	Cloning vector pPLEX-4004, complete sequence		1471		0.0	100%
AY159033.1	Cloning vector pPLEX-4003, complete sequence				0.0	100%
AY159032.1	Cloning vector pPLEX-4002, complete sequence				0.0	100%
AY159031.1	Cloning vector pPLEX-4001, complete sequence				0.0	100%
AY159029.1	Cloning vector pPLEX-501, complete sequence	1471	1471	57%	0.0	100%
AY159020.1		1471	1471	57%	0.0	100%
AY048743.1	Template plasmid pKD4, complete sequence	1471	1471	57%	0.0	100%
AY237648.1	Cloning vector pHR50, complete sequence	1471	1471	57%	0.0	100%
AY237649.1	Cloning vector pHR3-km, complete sequence	1471	1471	57%	0.0	100%
AY265466.1	Shuttle vector pAM2770, complete sequence	1471	1471	57%	0.0	100%
	RAGE vector pRIG1, complete sequence		1471		0.0	100%
AL671256.1	Trypanosoma brucei VO2 VSG expression site BAC				0.0	100%
AF286462.1	Promoter probe vector pPROBE'-gfp[LVA], complete sequence	1471	1471	57%	0.0	100%
AF286461.1	Promoter probe vector pPROBE-gfp[LVA], complete sequence	1471	1471	57%	0.0	100%
AF286460.1	Promoter probe vector pPROBE'-gfp[ASV], complete sequence					100%
AF286459.1	Promoter probe vector pPROBE-gfp[ASV], complete sequence					100%
AF286458.1	Promoter probe vector pPROBE'-gfp[AAV], complete sequence					100%
AF286457.1	Promoter probe vector pPROBE-gfp[AAV], complete sequence	1471	1471	57%	0.0	100%
AF286456.1	Promoter probe vector pPROBE'-gfp[tagless], complete sequence				0.0	
AF286455.1	complete sequence					100%
AF286454.1	Promoter probe vector pPROBE-NT', complete	1471	1471	57%	0.0	100%

AF286453.1 Promoter probe vector pPROBE-NT, complete 1471 1471 57% 0.0 100%	
sequence	
AY962288.1 Low threshold vector pLTSUB-302, complete 1471 1471 57% 0.0 100% sequence	
AY952935.1 Expression vector pFNK-101, complete 1471 1471 57% 0.0 100% sequence	*******
AY952936.1 Expression vector pINV-110, complete 1471 1471 57% 0.0 100% sequence	*******
DQ225747.1 Gene trapping Ds/T-DNA vector pUR224NB, 1471 1471 57% 0.0 100% complete sequence	
DQ225746.1 Gene trapping Ds/T-DNA vector pUR224NA, 1471 1471 57% 0.0 100% complete sequence	

Alignments Select All Get selected sequences Distance tree of results

>dbj|AB237837.1| Hepatitis C virus full-length replicon pFGR-JFH1 RNA, complet sequence Length=11111 Score = 2542 bits (1376), Expect = 0.0Identities = 1376/1376 (100%), Gaps = 0/1376 (0%) Strand=Plus/Plus 398 $\tt ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC$ 457 Query ÁTGÁTTGÁÁCÁÁGÁTGGÁTTGCÁCGCÁGGTTCTCCGGCCGCTTGGGTGGÁGÁGGCTÁTTC 457 398 Sbjct GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA 458 Query 458 GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA 517 Sbjct Query 518 577 ĠĊĠĊŔĠĠĠĠĊĠĊĊĊĠĠŤŤĊŤŤŤŤŤĠŤĊŘÁĠŔĊĊĠŔĊĊŤĠŤĊĊĠĠŤĠĊĊĊŤĠŔŔŤĠŔŔĊŤĠ 577 518 Sbjct 578 CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG 637 Query 637 578 Sbjct 638 CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG 697 Query Sbjct 638 697 GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG Query 698 757 698 GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG 757 Sbjct 758 CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC 817 Query 758 817 Sbjct Query 818 ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA 877 877 ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA Sbjct 818 GAGCATCAGGGGCTCGCGCCGACCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC 878 937 Query 878 GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC 937 Sbjct 938 GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT 997 Query Sbjct 938 997 1057 Query 998 GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC 998 1057 Sbjct ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC 1058 1117 Query 1058 ÁTAĞCĞTTĞĞCTÂCCCĞTĞATATTĞCTĞAAĞAĞCTTĞĞCĞĞCĞAATĞĞĞCTĞACCĞCTTC 1117 Sbjct 1118 CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT Query

```
Sbjct
    1118
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                  1177
        GACGAGTTCTTCTGAGTTTAAACCCTCTCCCTcccccccccatAACGTTACTGGCCGAAG
                                                  1237
Query
    1178
        GÁCGÁGTTCTTCTGÁGTTTÁÁÁCCCTCTCCCTCCCCCCCTÁÁCGTTÁCTGGCCGÁÁG
    1178
                                                  1237
Sbjct
Query
        CCGCTTGGAATAAGGCCGGTGTGCGTTTGTCTATATGTTATTTTCCACCATATTGCCGTC
    1238
                                                  1297
        CCGCTTGGAATAAGGCCGGTGTGCGTTTGTCTATATGTTATTTTCCACCATATTGCCGTC
                                                  1297
    1238
Sbjct
    1298
        TTTTGGCAATGTGAGGGCCCGGAAACCTGGCCCTGTCTTCTTGACGAGCATTCCTAGGGG
                                                  1357
Query
        1298
                                                  1357
Sbjct
        1417
Query
    1358
        Sbjct
    1358
        1417
        1477
Query
    1418
        1418
                                                  1477
Sbjct
        CCCACCTGGCGACAGGTGCCTCTGCGGCCAAAAGCCACGTGTATAAGATACACCTGCAAA
                                                  1537
Query
    1478
        CCCÁCCTGGCGACAGGTGCCTCTGCGGCCAAAAGCCACGTGTATAAGATACACCTGCAAA
                                                  1537
Sbjct
    1478
    1538
        GGCGGCACAACCCCAGTGCCACGTTGTGAGTTGGATAGTTGTGGAAAGAGTCAAATGGCT
                                                  1597
Query
        1538
                                                  1597
Sbjct
    1598
        CTCCTCAAGCGTATTCAACAAGGGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGG
                                                  1657
Query
        1598
        CTCCTCAAGCGTATTCAACAAGGGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGG
                                                  1657
Sbjct
        ATCTGATCTGGGGCCTCGGTGCACATGCTTTACATGTGTTTAGTCGAGGTTadaaaaCG
    1658
                                                  1717
Query
        ĂTĊŤĠĂTĊŤĠĠĠĠĊĊŤĊĠĠŤĠĊĂĊĂŤĠĊŤŤŤĂĊĂŤĠŤĠŤŤŤĂĠŤĊĠĀĠĠŤŤĂÁĀĀĀĀĀĊĠ
    1658
                                                  1717
Sbjct
    1718
        TCTAGGCCCCCGAACCACGGGGACGTGGTTTTCCTTTGAAAAACACGATGATACC
                                               1773
Query
        Sbjct
    1718
>dbj|AB114136.1| Hepatitis C virus replicon pSGR-JFH1 gene for neomysin resistan
gene product, hepatitis C virus nonstructural protein,
complete cds
Length=8024
Score = 2542 bits (1376), Expect = 0.0 Identities = 1376/1376 (100%), Gaps = 0/1376 (0%)
Strand=Plus/Plus
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  457
Query
        398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  457
Sbjct
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  517
Query
        458
                                                  517
Sbjct
    518
        577
Query
        577
Sbjct
    518
    578
        CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                  637
Query
        CÁGGÁCGÁGGCÁGCGCTÁTCGTGGCTGGCCÁCGÁCGGCGTTCCTTGCGCÁGCTGTG
    578
                                                  637
Sbjct
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
Query
    638
                                                  697
        ĊŢĊĠĊĠŢŢĠŢĊĊĊŢĠĂĠĊĠĠĠĂĠĠĠĠĊŢĠĊŢĠĊŢĂŢŢĠĠĊĠĂĠŢĠĊĊĠĠĠĠĊĀĠ
Sbjct
    638
                                                  697
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
Query
    698
                                                  757
        698
                                                  757
Sbjct
    758
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                  817
Query
        Sbjct
    758
                                                  817
```

```
Query
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                               877
Sbjct
    818
    878
        GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                               937
Query
        937
Sbjct
    878
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                               997
    938
Query
        Sbjct
    938
                                               997
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                               1057
Query
        998
                                               1057
Sbjct
Query
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                               1117
        1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                               1117
Sbjct
        \tt CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
    1118
                                               1177
Query
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
    1118
                                               1177
Sbjct
                                               1237
Query
    1178
        GACGAGTTCTTCTGAGTTTAAACCCTCTCCCTcocccccccaACGTTACTGGCCGAAG
        1178
                                               1237
Sbjct
Query
        \verb|CCGCTTGGAATAAGGCCGGTGTGCGTTTGTCTATATGTTATTTTCCACCATATTGCCGTC|\\
                                               1297
    1238
        1238
                                               1297
Sbjct
        1298
                                               1357
Query
    1298
                                               1357
Sbjct
                                               1417
Query
    1358
        Sbjct
    1358
        1417
Query
    1418
        1477
        1477
    1418
Sbjct
    1478
        CCCACCTGGCGACAGGTGCCTCTGCGGCCAAAAGCCACGTGTATAAGATACACCTGCAAA
                                               1537
Query
        1537
        CCCACCTGGCGACAGGTGCCTCTGCGGCCAAAAGCCACGTGTATAAGATACACCTGCAAA
Sbict
    1478
    1538
        GGCGGCACAACCCCAGTGCCACGTTGTGAGTTGGATAGTTGTGGAAAGAGTCAAATGGCT
                                               1597
Query
        Sbjct
    1538
        GGCGGCACAACCCCAGTGCCACGTTGTGAGTTGGATAGTTGTGGAAAGAGTCAAATGGCT
                                               1597
    1598
Query
        CTCCTCAAGCGTATTCAACAAGGGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGG
                                               1657
        CTCCTCAAGCGTATTCAACAAGGGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGG
    1598
                                               1657
Sbjct
    1658
        ATCTGATCTGGGGCCTCGGTGCACATGCTTTACATGTGTTTAGTCGAGGTTaaaaaaaCG
                                               1717
Query
        1658
        ĂTĊŤĠĂTĊŤĠĠĠĠĊĊŤĊĠĠŤĠĊĂĊĂŤĠĊŤŤŤĂĊĂŤĠŤĠŤŤŤĂĠŤĊĠĀĠĠŤŤĂÁĀĀĀĀĀĊĠ
                                               1717
Sbjct
    1718
        TCTAGGCCCCCGAACCACGGGGACGTGGTTTTCCTTTGAAAAACACGATGATACC
                                            1773
Query
        1718
                                            1773
Sbjct
>gb|AF311318.1|AF311318 Retroviral vector NIT, complete sequence
Léngth=7607
Score = 2390 \text{ bits } (1294),
                 Expect = 0.0
Identities = 1370/1401 (97%), Gaps = 28/1401 (1%)
Strand=Plus/Plus
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                               457
Query
    398
        1745
    1686
Sbjct
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                               517
Query
        Sbjct
    1746
        ĠĠĊŤŔŦĠŔĊŦĠĠĠĊŔĊŔŔĊŔĠŔĊŔŔŦĊĠĠĊŤĠĊŤĊŤĠŔŦĠĊĊĠĊĊĠŦĠŤŤĊĊĠĠĊŦĠŤĊŔ
                                               1805
```

Query	518	GCGCAGGGGCCCCGGTTCTTTTTGTCAAGACCGACCTGTCCGGTGCCCTGAATGAA	577
Sbjct	1806	GCGCAGGGGCCCCGGTTCTTTTTGTCAAGACCGACCTGTCCGGTGCCCTGAATGAA	1865
Query	578	CAGGACGAGGCAGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG	637
Sbjct Query	1866 638	CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG	1925 697
Sbjct	1926	CICGACGITGICACIGAAGCGGGAAGGGACIGCIGCIAIIGGGCGAAGIGCCGGGGCAG	1985
Query	698	GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG	757
Sbjct	1986		2045
Query	758	CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC	817
Sbjct	2046		2105
Query	818	ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA	877
Sbjct	2106		2165
Query	878	GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC	937
Sbjct	2166		2225
Query	938	GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT	997
Sbjct	2226	GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT	2285
Query	998	GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC	1057
Sbjct	2286	ĠĠĊĊĠĊŤŤŤĊŤĠĠĂŤŤĊĂŤĊĠĂĊŤĠŤĠĠĊĠĠĊŤĠĠĠĠĠĠĠĠ	2345
Query	1058	ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC	1117
Sbjct	2346	ÁTAGCGTTGGCTÁCCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC	2405
Query	1118	CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT	1177
Sbjct	2406	CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT	2465
Query	1178	GACGAGTTCTTCTGAGT-TTAAACCCTCTCC-CTGGG-G	1213
Sbjct	2466	GACGAGTTCTTCTGAGCGGGACTCTGGGGTTCGGTTAAACGAATTCCGCCCCTCTCCCTC	2525
Query		deddddTAACGTTACTGGCCGAAGCCGCTTGGAATAAGGCCGGTGTGCGTTTGTCTA	1270
Sbjct	2526	CCCCCCCTAACGTTACTGGCCGAAGCCGCTTGGAATAAGGCCGGTGTGCGTTTGTCTA	2585
Query	1271 2586	TATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGGAAACCTGGCCC	1330
Sbjct	1331	TATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGGAAACCTGGCCC TGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGAATGCAAGGTCT	2645 1390
Query Sbjct	2646	TGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGAATGCAAGGTCT	2705
Query	1391	GTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAACAACGTCTGT	1450
Sbjct	2706		2765
Query	1451	AGCGACCCTTTGCAGGCAGCGGAACCCCCCACCTGGCGACAGGTGCCTCTGCGGCCAAAA	1510
Sbjct	2766		2825
Query	1511	GCCACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCCAGTGCCACGTTGTGAGTTG	1570
~ - Sbjct	2826		2885
Query	1571	GATAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAGGGGCTGAAGGA	1630
Sbjct	2886		2945
Query	1631	TGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGCACATGCTTTAC	1690
Sbjct	2946		3005

```
1691
Query
         ATGTGTTTAGTCGAGGTTaaaaaaaCGTCTAGGCCCCCGAACCACGGGGACGTGGTTTT
                                                      1750
          3006
         GTGTGTTTAGTCGAGGTTAAAAAA-CGTCTAGGCCCCCGAACCACGGGGACGTGGTTTT
                                                      3064
Sbjct
     1751
         CCTTTGAAAAACACGATGATA
                         1771
Query
         3065
                          3085
Sbjct
>dbj|AB119282.1| Hepatitis C virus gene for Fusion protein, Feo, complete cds
Length=9658
                                         Sort alignments for this
                                          E value Score Percen
                                          Query start position
Score = 1483 bits (803), Expect = 0.0 Identities = 803/803 (100%), Gaps = 0/803 (0%)
Strand=Plus/Plus
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Query
     398
                                                      457
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
     2046
                                                      2105
Sbjct
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
     458
                                                      517
         2106
                                                      2165
Sbjct
         Query
     518
                                                      577
         2166
                                                      2225
Sbjct
         578
                                                      637
Query
     2226
                                                      2285
Sbjct
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                      697
Query
     638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
Sbjct
     2286
                                                      2345
Query
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                      757
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                      2405
     2346
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                      817
Query
         2406
                                                      2465
Sbjct
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                      877
Query
         Sbjct
     2466
                                                      2525
         GAGCATCAGGGGCTCGCCCCGACCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                      937
Query
     878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
     2526
                                                      2585
Sbjct
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                      997
Query
         2586
                                                      2645
Sbjct
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                      1057
Query
         2646
                                                      2705
Sbjct
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                      1117
Query
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     2706
                                                      2765
Sbjct
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Query
     1118
                                                      1177
         ĊŤĊĠŤĠĊŤŤŤĂĊĠĠŤĂŤĊĠĊĊĠĊŤĊĊĊĠĂŤŤĊĠĊĂĠĊĠĊĂŤĊĠĊĊŤŤĊŤĂŤĊĠĊĊŤŤĊŤŤ
Sbjct
     2766
                                                      2825
         GACGAGTTCTTCTGAGTTTAAAC
Query
     1178
                           1200
         2826
                           2848
Sbjct
Score = 1048 bits (567), Expect = 0.0 Identities = 572/574 (99%), Gaps = 1/574 (0%)
Strand=Plus/Plus
```

```
1200
                                                     1259
Query
         CCCTCTCCCTooocccoocTAACGTTACTGGCCGAAGCCGCTTGGAATAAGGCCGGTGT
         2887
                                                     2946
Sbjct
         GCGTTTGTCTATATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGG
    1260
                                                     1319
Query
    2947
         GCGTTTGTCTATATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGG
                                                     3006
Sbjct
         AAACCTGGCCCTGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGA
                                                     1379
Query
    1320
         Sbjct
    3007
         AAACCTGGCCCTGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGA
                                                     3066
         ATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAA
Query
    1380
                                                     1439
         ATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAA
    3067
                                                     3126
Sbjct
    1440
         ACAACGTCTGTAGCGACCCTTTGCAGGCAGCGGAACCCCCCACCTGGCGACAGGTGCCTC
                                                     1499
Query
         3127
         ACAACGTCTGTAGCGACCCTTTGCAGGCAGCGGAACCCCCCACCTGGCGACAGGTGCCTC
                                                     3186
Sbict
    1500
         TGCGGCCAAAAGCCACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCCAGTGCCAC
                                                     1559
Query
         Sbjct
    3187
                                                     3246
    1560
         GTTGTGAGTTGGATAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAG
                                                     1619
Query
         3247
Sbjct
                                                     3306
    1620
         GGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGC
                                                     1679
Query
         3307
                                                     3366
Sbjct
    1680
         ACATGCTTTACATGTGTTTAGTCGAGGTTaaaaaaaCGTCTAGGCCCCCCGAACCACGGG
                                                     1739
Query
         Sbjct
    3367
         ACATGCTTTACATGTGTTTAGTCGAGGTTAAAAAA-CGTCTAGGCCCCCCGAACCACGGG
                                                     3425
    1740
         GACGTGGTTTTCCTTTGAAAAACACGATGATACC
                                  1773
Query
         3426
         GACGTGGTTTTCCTTTGAAAAACACGATAATACC
                                  3459
Sbjct
>gb|DQ320121.1| Simary vector pBINPLUS/ARS, complete sequence
Length=12460
Score = 1483 bits (803),
                  Expect = 0.0
Identities = 803/803 (100%), Gaps = 0/803 (0%)
Strand=Plus/Plus
Query
    398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     457
         7952
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     8011
Sbjct
    458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     517
Query
         8012
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     8071
Sbjct
    518
         577
Query
         8131
Sbjct
    8072
                                                     637
    578
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
Query
         8132
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                     8191
Sbjct
    638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                     697
Query
         8192
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                     8251
Sbjct
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     757
Query
         Sbjct
    8252
                                                     8311
    758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
                                                     817
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    8312
                                                     8371
Sbjct
    818
Query
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
```

Score = 1483 bits (803),

```
Sbjct
     8372
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                        8431
                                                        937
Query
     878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
         8432
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                        8491
Sbjct
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                        997
Query
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
     8492
                                                        8551
Sbjct
Query
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        1057
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
     8552
                                                        8611
Sbjct
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                        1117
Query
     1058
         Sbjct
     8612
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                        8671
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                        1177
Query
     1118
         Sbjct
     8672
                                                        8731
     1178
         GACGAGTTCTTCTGAGTTTAAAC
                            1200
Query
         GACGAGTTCTTCTGAGTTTAAAC
Sbjct
```

>emb|AJ242651.1|SSE242651 Hepatitis C virus replicon I377/NS2-3'UTR Length=8637

Expect = 0.0

Identities = 803/803 (100%), Gaps = 0/803 (0%)

Sort alignments for this E value Score Percen Query start position

```
Strand=Plus/Plus
Query
    398
       ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                             457
       Sbjct
    387
                                             446
    458
       GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
                                             517
       GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
    447
                                             506
Sbjct
Query
       518
                                             577
       507
                                             566
Sbjct
Query
    578
       CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                             637
       626
    567
Sbjct
    638
       CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                             697
Query
       ĊŢĊĠĊĠŢŢĠŢĊĊĊŢĠĂĠĊĠĠĠĂĠĠĠĠĊŢĠĊŢĠĊŢĂŢŢĠĠĊĠĂĠŢĠĊĊĠĠĠĠĊĀĠ
    627
                                             686
Sbjct
    698
       GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                             757
Query
       Sbjct
    687
                                             746
    758
       CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                             817
Query
       747
                                             806
Sbjct
    818
       ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                             877
Query
       807
Sbjct
                                             866
Query
    878
       GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                             937
       926
Sbjct
    867
       GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                             997
    938
Query
```

GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT

GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC

927

998

Sbjct

Query

986

```
Sbjct
     987
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        1046
Query
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                        1117
         1047
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                        1106
Sbjct
         \tt CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Query
     1118
                                                        1177
         1166
     1107
Sbjct
Query
     1178
         GACGAGTTCTTCTGAGTTTAAAC
                            1200
         GACGAGTTCTTCTGAGTTTAAAC
Sbjct
     1167
Score = 1048 bits (567), Expect = 0.0 Identities = 572/574 (99%), Gaps = 1/574 (0%)
Strand=Plus/Plus
         1259
     1200
Query
     1228
                                                        1287
Sbjct
Query
         GCGTTTGTCTATATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGG
     1260
                                                        1319
         GCGTTTGTCTATATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGG
     1288
                                                        1347
Sbjct
         AAACCTGGCCCTGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGA
                                                        1379
Query
     1320
         1348
         AAACCTGGCCCTGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGA
                                                        1407
Sbjct
     1380
         ATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAA
                                                        1439
Query
         Sbjct
     1408
                                                        1467
Query
     1440
         ACAACGTCTGTAGCGACCCTTTGCAGGCAGCGGAACCCCCCACCTGGCGACAGGTGCCTC
                                                        1499
         ACAACGTCTGTAGCGACCCTTTGCAGGCAGCGGAACCCCCCACCTGGCGACAGGTGCCTC
     1468
                                                        1527
Sbjct
         1500
                                                        1559
Query
     1528
                                                        1587
Sbjct
     1560
         GTTGTGAGTTGGATAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAG
                                                        1619
Query
         Sbjct
     1588
         GTTGTGAGTTGGATAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAG
                                                        1647
         GGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGC
Query
     1620
                                                        1679
         GGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGC
     1648
                                                        1707
Sbjct
     1680
         ACATGCTTTACATGTGTTTAGTCGAGGTTaaaaaaaCGTCTAGGCCCCCCGAACCACGGG
                                                        1739
Query
         1708
         ACATGCTTTACATGTGTTTAGTCGAGGTTAAAAAA-CGTCTAGGCCCCCCGAACCACGGG
                                                        1766
Sbjct
Query
     1740
         GACGTGGTTTTCCTTTGAAAAACACGATGATACC
                                    1773
         Sbjct
     1767
                                    1800
>emb|AJ242654.1|SSE242654 Hepatitis C virus replicon I389/NS3-3'UTR
Length=8001
                                            Query start position
Score = 1483 bits (803),
                   Expect = 0.0
```

Sort alignments for this E value Score Percen

```
Identities = 803/803 (100%), Gaps = 0/803 (0%)
Strand=Plus/Plus
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                 457
    398
Query
        Sbjct
    399
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                 458
Query
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
        Sbjct
    459
                                                 518
Query
    518
        577
```

```
519
         578
Sbjct
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                    637
    578
Query
         579
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                    638
Sbjct
    638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    697
Query
         639
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    698
Sbjct
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                    757
Query
        Sbjct
    699
                                                    758
    758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                    817
Query
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    759
                                                    818
Sbjct
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
Query
         819
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    878
Sbjct
         GAGCATCAGGGGCTCGCGCCGACCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
Query
    878
                                                    937
         GÁGCÁTCÁGGGGCTCGCGCCÁGCCGÁÁCTGTTCGCCÁGGCTCÁÁGGCGCGCÁTGCCCGÁC
                                                    938
    879
Sbjct
    938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    997
Query
         939
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    998
Sbjct
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                    1057
Query
         Sbjct
    999
                                                    1058
Query
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    1117
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
    1059
                                                    1118
Sbjct
        1118
                                                    1177
Query
    1119
                                                    1178
Sbjct
    1178
        GACGAGTTCTTCTGAGTTTAAAC
                          1200
Query
         Sbjct
    1179
        GACGAGTTCTTCTGAGTTTAAAC
                          1201
Score = 1048 bits (567),
                 Expect = 0.0
Identities = 572/574 (99%), Gaps = 1/574 (0%)
Strand=Plus/Plus
        \verb|CCCTCTCCCTeeeccceeetAACGTTACTGGCCGAAGCCGCTTGGAATAAGGCCGGTGT|\\
    1200
                                                    1259
Query
        1240
                                                    1299
Sbjct
Query
    1260
        GCGTTTGTCTATATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGG
                                                    1319
         1300
         ĠĊĠŤŤŤĠŤĊŤÁŤÁŤĠŤŤÁŤŤŤŤĊĊŔĊĊĂŤŔŤŤĠĆĊĠŤĊŤŤŤŤĠĠĊŔŔŤĠŤĠŔĠĠĠĊĊĊĠĠ
                                                    1359
Sbjct
    1320
        AAACCTGGCCCTGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGA
                                                    1379
Query
         1360
        AAACCTGGCCCTGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGA
                                                    1419
Sbjct
    1380
        ATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAA
                                                    1439
Query
         ATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAA
    1420
                                                    1479
Sbjct
        ACAACGTCTGTAGCGACCCTTTGCAGGCAGCGGAACCCCCCACCTGGCGACAGGTGCCTC
                                                    1499
Query
    1440
         Sbjct
    1480
        ACAACGTCTGTAGCGACCCTTTGCAGGCAGCGGAACCCCCCACCTGGCGACAGGTGCCTC
                                                    1539
Query
        TGCGGCCAAAAGCCACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCCAGTGCCAC
    1500
                                                    1559
        1540
                                                    1599
Sbjct
    1560
        GTTGTGAGTTGGATAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAG
                                                    1619
Query
         1600
        GTTGTĠAGTTGĠATAGTTGTĠGAAAĠAGTCAAATGGCTCTCCTCAAĠCGTATTCAACAAĠ
                                                    1659
Sbjct
```

```
1620
        GGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGC
                                                   1679
Query
         Sbjct
    1660
        GGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGC
                                                   1719
    1680
        ACATGCTTTACATGTGTTTAGTCGAGGTTaaaaaaaaCGTCTAGGCCCCCCGAACCACGGG
                                                   1739
        1720
Sbjct
                                                   1778
Query 1740
        GACGTGGTTTTCCTTTGAAAAACACGATGATACC 1773
         GACGTGGTTTTCCTTTGAAAAACACGATAATACC
Sbjct
```

>emb|AJ242653.1|SSE242653 Hepatitis C virus replicon I389/NS2-3'UTR Length=8649

Sort alignments for this E value Score Percen Query start position

Score = 1483 bits (803), Expect = 0.0 Identities = 803/803 (100%), Gaps = 0/803 (0%) Strand=Plus/Plus

Query	398	ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC	457
Sbjct	399		458
Query	458	GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA	517
Sbjct	459	GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA	518
Query	518	GCGCAGGGGCCCCGGTTCTTTTTGTCAAGACCGACCTGTCCGGTGCCCTGAATGAA	577
Sbjct	519	GCGCAGGGCCCCGGTTCTTTTTGTCAAGACCGACCTGTCCGGTGCCCTGAATGAA	578
Query	578	CAGGACGAGGCAGCGGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG	637
Sbjct	579	CAGGACGAGCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG	638
Query	638	CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGTTTGGGCGAAGTGCCGGGGCAG	697
Sbjct	639	ctcgacgttgtcactgaagcggaagggactggctgctattgggcgaagtgccggggcag	698
Query	698	GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG	757
Sbjct	699	GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG	758
Query	758	CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC	817
Sbjct	759	cgccggctgcatacgcttgatccggctacctgcccattcgaccaccaagcgaaacatcgc	818
Query	818	ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA	877
Sbjct	819	atcgagcgagcacgtactcggatggaagccggtcttgtcgatcaggatgatctggacgaa	878
Query	878	GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC	937
Sbjct	879	ĠĀĠĊĀŢĊĀĠĠĠĠĊŢĊĠĊĠĊĊĀĠĊĊĠĀĀĊŢĠŢŢĊĠĊĊĀĠĠĊŢĊĀĀĠĠĊĠĊĠĊĀŢĠĊĊĊĠĀĊ	938
Query	938	GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT	997
Sbjct	939	gccgacgatctcctcctcatccatcccatccctcctcctccaatatcatc	998
Query	998	GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC	1057
Sbjct	999	ĠĠĊĊĠĊŤŤŤĊŤĠĠĂŤŤĊĂŤĊĠĂĊŤĠŤĠĠĊĊĠĠŤĠŤĠĠĊĠĠĀĊĊĠĊŤĂŤĊĀĠĠĀĊ	1058
Query	1058	ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC	1117
Sbjct	1059	atagcgttggctacccgtgatattgctgaagagcttggcggcgaatgggctgaccgcttc	1118
Query	1118	CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT	1177
Sbjct	1119	ĊŢĊĠŢĠĊŢŢŢŸĊĠĠŢŸŢĊĠĊĠĊŢĊĊĠŸŢŢĊĠĊŸŢĊĠĊĠĊŢŢĊŢŸŢĊŢŢ	1178
Query	1178	GACGAGTTCTTCTGAGTTTAAAC 1200	

Sbjct 1179 GACGAGTTCTTCTGAGTTTAAAC 1201

```
Score = 1048 bits (567), Expect = 0.0 Identities = 572/574 (99%), Gaps = 1/574 (0%)
Strand=Plus/Plus
         CCCTCTCCCTededededtAACGTTACTGGCCGAAGCCGCTTGGAATAAGGCCGGTGT
    1200
                                                       1259
Query
     1240
         CCCTCTCCCTCCCCCCCCTAACGTTACTGGCCGAAGCCGCTTGGAATAAGGCCGGTGT
                                                       1299
Sbjct
         GCGTTTGTCTATATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGG
Query
     1260
                                                       1319
         Sbjct
     1300
         GCGTTTGTCTATATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGG
                                                       1359
         AAACCTGGCCCTGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGA
Query
     1320
                                                       1379
         AAACCTGGCCTGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGA
     1360
                                                       1419
Sbjct
     1380
         ATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAA
                                                       1439
Query
         1420
         ATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAA
                                                       1479
Sbict
     1440
         ACAACGTCTGTAGCGACCCTTTGCAGGCAGCGGAACCCCCACCTGGCGACAGGTGCCTC
                                                       1499
Query
         Sbjct
     1480
                                                       1539
     1500
         TGCGGCCAAAAGCCACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCCAGTGCCAC
                                                       1559
Query
         1540
                                                       1599
Sbjct
     1560
         GTTGTGAGTTGGATAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAG
                                                       1619
Query
         GTTGTGAGTTGGATAGTTGTGGAAAGAGTCAAATGGCTCTCCAAGCGTATTCAACAAG
     1600
                                                       1659
Sbjct
     1620
         GGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGC
                                                       1679
Query
         GGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGC
Sbjct
     1660
                                                       1719
         ACATGCTTTACATGTGTTTAGTCGAGGTTaaaaaaCGTCTAGGCCCCCGAACCACGGG
Query
     1680
                                                       1739
         1720
         ACATGCTTTACATGTGTTTAGTCGAGGTTAAAAAA-CGTCTAGGCCCCCCGAACCACGGG
                                                       1778
Sbjct
     1740
         GACGTGGTTTTCCTTTGAAAAACACGATGATACC
Query
         Sbjct
         GACGTGGTTTTCCTTTGAAAAACACGATAATACC
                                    1812
>emb|AJ242652.1|SSE242652 Hepatitis C virus replicon I377/NS3-3'UTR
Length=7989
                                          Sort alignments for this
                                           E value Score Percen
                                           Query start position
Score = 1483 bits (803),
                   Expect = 0.0
Identities = 803/803 (100%), Gaps = 0/803 (0%)
Strand=Plus/Plus
Query
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                       457
         ÁTGÁTTGÁÁCÁÁGÁTGGÁTTGCÁCGCÁGGTTCTCCGGCCGCTTGGGTGGÁGAGGCTÁTTC
                                                       446
     387
Sbjct
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                       517
Query
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Sbjct
     447
                                                       506
Query
     518
         577
         507
Sbjct
                                                       566
     578
         CAGGACGAGGCAGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                       637
Query
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
     567
                                                       626
Sbjct
     638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                       697
Query
         Sbjct
     627
                                                       686
Query
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                       757
```

GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG

687

Sbjct

```
817
     758
Query
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
         747
                                                        806
Sbjct
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                        877
Query
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
     807
                                                        866
Sbjct
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                        937
Query
     878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
Sbjct
     867
                                                        926
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                        997
Query
     938
         GGCGÁGGÁTCTCGTCGTGÁCCCÁTGGCGÁTGCCTGCTTGCCGÁÁTÁTCÁTGGTGGÁÁÁÁT
Sbjct
     927
                                                        986
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        1057
Query
         987
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        1046
Sbjct
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                        1117
Query
         Sbjct
     1047
                                                        1106
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                        1177
Query
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Sbjct
     1107
                                                        1166
     1178
         GACGAGTTCTTCTGAGTTTAAAC
Query
          1167
         GACGAGTTCTTCTGAGTTTAAAC
                            1189
Sbjct
Score = 1048 bits (567), Expect = 0.0 Identities = 572/574 (99%), Gaps = 1/574 (0%)
Strand=Plus/Plus
     1200
         CCCTCTCCCTcccccccatAACGTTACTGGCCGAAGCCGCTTGGAATAAGGCCGGTGT
                                                        1259
Query
         Sbjct
     1228
                                                        1287
         GCGTTTGTCTATATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGG
Query
     1260
                                                        1319
          GCGTTTGTCTATATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGG
Sbjct
     1288
                                                        1347
         AAACCTGGCCCTGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGA
Query
     1320
                                                        1379
         AAACCTGGCCCTGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGA
     1348
                                                        1407
Sbjct
Query
     1380
         ATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAA
                                                        1439
         1408
                                                        1467
Sbjct
     1440
         ACAACGTCTGTAGCGACCCTTTGCAGGCAGCGGAACCCCCCACCTGGCGACAGGTGCCTC
                                                        1499
Query
         ACAACGTCTGTAGCGACCCTTTGCAGGCAGCGGAACCCCCACCTGGCGACAGGTGCCTC
     1468
                                                        1527
Sbjct
     1500
         TGCGGCCAAAAGCCACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCCAGTGCCAC
                                                        1559
Query
         Sbjct
     1528
                                                        1587
         GTTGTGAGTTGGATAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAG
                                                        1619
Query
     1560
         1647
     1588
Sbjct
     1620
         GGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGC
                                                        1679
Query
         1648
                                                        1707
Sbjct
Query
     1680
         ACATGCTTTACATGTGTTTAGTCGAGGTTaaaaaaaCGTCTAGGCCCCCCGAACCACGGG
                                                        1739
         1708
         ACATGCTTTACATGTGTTTAGTCGAGGTTAAAAAA-CGTCTAGGCCCCCCGAACCACGGG
                                                        1766
Sbjct
     1740
         GACGTGGTTTTCCTTTGAAAAACACGATGATACC
                                    1773
Query
          1767
         GACGTGGTTTTCCTTTGAAAAACACGATAATACC
                                    1800
Sbict
```

>gb|FJ155667.1| Allelic replacement vector pJC84, complete sequence

Length=3775

```
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     457
Query
    398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     2254
     2313
Sbjct
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     517
Query
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     2194
     2253
Sbjct
         577
Query
     518
         Sbjct
     2193
                                                     2134
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                     637
Query
     578
         2074
     2133
Sbjct
     638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                     697
Query
         2073
                                                     2014
Sbjct
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     757
Query
         2013
                                                     1954
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     817
Query
         1953
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     1894
Sbjct
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
     818
                                                     877
Query
         1893
                                                     1834
Sbjct
     878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
Query
         Sbjct
     1833
                                                     1774
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                     997
Query
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
     1773
                                                     1714
Sbjct
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Query
     998
                                                     1057
         1713
                                                     1654
Sbjct
Query
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     1117
         1594
Sbjct
     1653
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                     1177
Query
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     1593
                                                     1534
Sbjct
         GACGAGTTCTTCTGAG
                      1193
Query
     1178
         Sbjct
     1533
         GACGAGTTCTTCTGAG
                      1518
>dbj|AB434475.1| Synthetic construct gfpuv5, aphA genes for green fluorescent protein UV5, kanamycin resistance, complete cds, clone: pT2
Length=2773
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     457
    398
Query
         1485
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     1544
Sbjct
Query
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Sbjct
     1545
                                                     1604
Query
     518
         577
```

```
1605
        1664
Sbjct
        CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                   637
    578
Query
         1665
        CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                   1724
Sbjct
Query
    638
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                   697
         1725
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                   1784
Sbjct
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
    698
                                                   757
Query
        Sbjct
    1785
                                                   1844
    758
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                   817
Query
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    1845
                                                   1904
Sbjct
Query
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
        1905
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                   1964
Sbjct
        GAGCATCAGGGGCTCGCGCCGACCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
Query
    878
                                                   937
        GÁGCÁTCÁGGGGCTCGCGCCÁGCCGÁÁCTGTTCGCCÁGGCTCÁÁGGCGCGCÁTGCCCGÁC
    1965
                                                   2024
Sbjct
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                   997
Query
    938
         2025
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                   2084
Sbjct
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                   1057
Query
        2085
                                                   2144
Sbjct
Query
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                   1117
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                   2204
    2145
Sbjct
    1118
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                   1177
Query
        2205
                                                   2264
Sbjct
    1178
        GACGAGTTCTTCTGAG
                     1193
Query
         Sbjct
    2265
        GACGAGTTCTTCTGAG
                     2280
>dbj|AB434474.1| Synthetic construct gfpuv5, aphA genes for green fluorescent
protein UV5, kanamycin resistance, complete cds, clone: pT1
Length=3068
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                   457
Query
        1780
                                                   1839
Sbjct
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                   517
Query
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
    1840
                                                   1899
Sbjct
        577
    518
Query
         1900
                                                   1959
Sbjct
        CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
Query
    578
                                                   637
         Sbjct
    1960
        CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                   2019
Query
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                   697
    638
        2079
    2020
Sbjct
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                   757
Query
         2080
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                   2139
Sbjct
```

```
Query
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                       817
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                       2199
Sbjct
     2140
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                       877
Query
         2200
                                                       2259
Sbjct
     878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                       937
Query
          ĠĂĠĊĂŤĊĂĠĠĠĠĊŤĊĠĊĠĊĊĂĠĊĊĠĂĂĊŤĠŤŤĊĠĊĊĂĠĠĊŤĊĂĂĠĠĊĠĊĠĊĂŤĠĊĊĊĠĂĊ
Sbjct
     2260
                                                       2319
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                       997
Query
         2320
                                                       2379
Sbjct
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                       1057
Query
         2380
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                       2439
Sbjct
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                       1117
Query
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     2440
                                                       2499
Sbjct
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Query
     1118
                                                       1177
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     2500
                                                       2559
Sbjct
Query
     1178
         GACGAGTTCTTCTGAG
                       1193
         ||||||||||||||||||||||||||GACGAGTTCTTCTGAG
     2560
                       2575
Sbjct
>dbj|AB434472.1| Synthetic construct aphA, pyrE, gfpuv5 genes for kanamycin resi orotate phosphoribosyltransferase, green fluorescent protein UV5, complete cds, clone: OSU12-pyrE
Length=4263
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                       457
Query
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
     1289
                                                       1230
Sbjct
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
     458
                                                       517
         1229
                                                       1170
Sbjct
Query
     518
         577
         Sbjct
     1169
                                                       1110
     578
         CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                       637
Query
         CÁGGÁCGÁGGCÁGCGCTÁTCGTGGCTGGCCÁCGÁCGGCGTTCCTTGCGCÁGCTGTG
     1109
                                                       1050
Sbjct
Query
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                       697
     638
         1049
                                                       990
Sbjct
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                       757
Query
         989
                                                       930
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                       817
Query
         870
Sbjct
     929
Query
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
Sbjct
     869
                                                       810
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
     878
                                                       937
Query
         809
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                       750
Sbjct
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                       997
Query
```

```
Sbjct
     749
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                      690
     998
Query
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                      1057
         ĠĠĊĊĠĊŦŤŦŤĊŦĠĠĂŦŦĊĂŦĊĠŔĊŦĠŦĠĠĊĊĠĠĊŦĠĠĠŦĠŦĠĠĊĠĠŔĊĊĠĊŦŔŦĊŔĠĠŔĊ
Sbjct
     689
                                                      630
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Query
     1058
                                                      1117
         629
                                                      570
Sbjct
Query
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                      1177
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     569
                                                      510
Sbjct
     1178
         GACGAGTTCTTCTGAG
                      1193
Query
         1111111111111111
         GACGAGTTCTTCTGAG
                      494
Sbjct
     509
            Saccharomyces cerevisiae gene for aquaporin Aqyl, complete cd
>dbi|AB293446.1|
clone: COS5
Length=45016
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
Query
     398
          ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                       457
          42231
          ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                       42290
Sbjct
     458
          GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                       517
Query
          GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                       42350
Sbjct
     42291
     518
          577
Query
          42351
                                                       42410
Sbjct
          CAGGACGAGGCAGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
     578
                                                       637
Query
          CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
     42411
                                                       42470
Sbjct
     638
          CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                       697
Query
          42471
                                                       42530
Sbjct
          GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
     698
                                                       757
Query
          GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
Sbjct
     42531
                                                       42590
          CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
     758
                                                       817
Query
          CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
     42591
                                                       42650
Sbjct
          ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
     818
                                                       877
Query
          42651
          ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                       42710
Sbjct
          GAGCATCAGGGGCTCGCGCCGACCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
Query
     878
                                                       937
          42711
                                                       42770
Sbjct
          997
Query
     938
     42771
                                                       42830
Sbjct
     998
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Query
                                                       1057
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Sbjct
     42831
                                                       42890
Query
     1058
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                       1117
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     42891
                                                       42950
Sbjct
     1118
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                       1177
Query
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     42951
                                                       43010
Sbjct
```

```
Query
     1178
          GACGAGTTCTTCTGAG
          1111111111111111
     43011
          GACGAGTTCTTCTGAG
                      43026
Sbjct
            Saccharomyces cerevisiae gene for aquaporin Aqyl, complete cd
>dbj|AB293445.1|
clone: COS4
Length=43682
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     457
Query
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     4335
Sbjct
     4394
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
     458
                                                     517
Query
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     4275
     4334
Sbjct
Query
     518
         577
         4274
                                                     4215
Sbjct
Query
     578
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                     637
         Sbjct
     4214
                                                     4155
         638
                                                     697
Query
Sbjct
     4154
                                                     4095
Query
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     757
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
Sbjct
     4094
                                                     4035
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
     758
                                                     817
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
     4034
                                                     3975
Sbjct
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                     877
Query
         3974
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                     3915
Sbjct
     878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
Query
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
Sbjct
     3914
                                                     3855
                                                     997
Query
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
         3795
Sbjct
     3854
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     1057
Query
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGCCGGACCGCTATCAGGAC
     3794
                                                     3735
Sbjct
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     1117
Query
         Sbjct
     3734
                                                     3675
```

>emb|FM162567.1| 🎆 Trypanosoma brucei Lister 427 surface glycoprotein expression site BES2/TAR129, from bloodstream Length=51758

1193

3599

CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT

CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT

```
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
```

GACGAGTTCTTCTGAG

|||||||||||||||||||||||||||||||GACGAGTTCTTCTGAG

1118

3674

1178

3614

Query

Sbjct

Query

Sbjct

1177

398

457

```
Query
        1005
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  1064
Sbjct
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  517
Query
        1124
Sbjct
    1065
    518
        577
Query
         Sbjct
    1125
                                                  1184
    578
        CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                  637
Query
        1185
                                                  1244
Sbjct
    638
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGTTTGGGCGAAGTGCCGGGGCAG
                                                  697
Query
        1245
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                  1304
Sbjct
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                  757
Query
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
    1305
                                                  1364
Sbjct
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
    758
                                                  817
        1365
                                                  1424
Sbjct
Query
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                  877
        1425
                                                  1484
Sbjct
    878
        GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                  937
Query
        1485
                                                  1544
Sbjct
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                  997
Query
    938
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
Sbjct
    1545
                                                  1604
Query
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                  1057
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
    1605
                                                  1664
Sbjct
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                  1117
Query
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                  1724
Sbjct
    1665
    1118
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                  1177
Query
        Sbjct
    1725
                                                  1784
Query
    1178
        GACGAGTTCTTCTGAG
                    1193
        ||||||||||||||||||||||||||||||||GACGAGTTCTTCTGAG
Sbjct
    1785
                    1800
>gb|EU491017.1|
           Suicide vector pEX18Km-pheS, complete sequence
Léngth=5161
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
                                                  457
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Query
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
    4767
                                                  4708
Sbjct
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
    458
        Sbjct
    4707
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  4648
Query
        518
                                                  577
        4647
                                                  4588
Sbjct
    578
        CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                  637
Query
         4587
        CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                  4528
Sbjct
```

ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC

```
638
Query
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
        4527
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                  4468
Sbjct
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                  757
Query
        4467
                                                  4408
Sbjct
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    758
                                                  817
Query
        Sbjct
    4407
                                                  4348
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                  877
Query
        4347
                                                  4288
Sbjct
    878
        GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                  937
Query
        4287
                                                  4228
Sbjct
    938
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                  997
Query
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
    4227
                                                  4168
Sbjct
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                  1057
Query
        4167
                                                  4108
Sbjct
Query
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
    1058
                                                  1117
        4107
                                                  4048
Sbjct
        1118
                                                  1177
Query
    4047
                                                  3988
Sbjct
    1178
        GACGAGTTCTTCTGAG
                    1193
Query
        3987
        GACGAGTTCTTCTGAG
Sbjct
                    3972
>qb|EU232662.1| Cloning vector pVMGCRT85, complete sequence
Length=11368
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Query
    398
                                                  457
        3541
                                                  3600
Sbjct
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  517
Query
        3601
                                                  3660
Sbjct
    518
        577
Query
        Sbjct
    3661
                                                  3720
Query
    578
        CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                  637
        3721
        CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                  3780
Sbjct
        \verb|CTCGACGTTGTCACTGAAGCGGGAAGGGGACTGGCTGTTTTGGGCGAAGTGCCGGGGCAG|\\
                                                  697
Query
    638
        3781
                                                  3840
Sbjct
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                  757
Query
        GÁTCTCCTGTCÁTCTCÁCCTTGCTCCTGCCGÁGÁÁÁGTÁTCCÁTCÁTGGCTGÁTGCÁÁTG
                                                  3900
    3841
Sbjct
Query
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    758
                                                  817
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Sbjct
    3901
                                                  3960
Query
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                  877
        3961
                                                  4020
Sbjct
```

```
937
Query
    878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
         4021
                                                    4080
Sbjct
         938
Query
                                                    997
     4081
                                                    4140
Sbjct
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                    1057
Query
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Sbjct
     4141
                                                    4200
    1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Query
                                                    1117
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     4201
                                                    4260
Sbjct
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    1177
Query
    1118
         4261
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    4320
Sbict
    1178
         GACGAGTTCTTCTGAG
                     1193
Query
         |||||||||||||||||||||||||||||||GACGAGTTCTTCTGAG
    4321
Sbjct
                     4336
>gb|EU232661.1| Cloning vector pVMG-TnpR, complete sequence
Length=7264
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
    398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                    457
Query
         Sbjct
    3019
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                    3078
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                    517
Query
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
    3079
                                                    3138
Sbjct
         577
    518
Query
         3139
         3198
Sbjct
Query
    578
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                    637
         3199
                                                    3258
Sbjct
    638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    697
Query
         3259
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    3318
Sbjct
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                    757
Query
         Sbjct
    3319
                                                    3378
Query
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                    817
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                    3438
    3379
Sbjct
                                                    877
    818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
Query
         Sbjct
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    3498
    3439
Query
    878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    937
         3499
                                                    3558
Sbjct
                                                    997
    938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
Query
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    3618
Sbjct
    3559
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                    1057
Query
         Sbjct
    3619
                                                    3678
Query
    1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    1117
         Sbjct
    3679
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    3738
```

Query

1118

1177

```
3739
                                                     3798
Sbjct
     1178
         GACGAGTTCTTCTGAG
                     1193
Query
         GACGAGTTCTTCTGAG
Sbjct
     3799
                      3814
>dbj|AB366441.1| 🞆 Salmonella enterica subsp. enterica serovar Dublin plasmid pM
DNA, complete genome, strain: L-789
Length=61571
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     457
Query
         10135
Sbjct
     10076
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
     458
                                                     517
Query
         10136
                                                     10195
Sbjct
Query
     518
         577
         10196
                                                     10255
Sbjct
Query
     578
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                     637
          CÁGGÁCGÁGGCÁGCGCTÁTCGTGGCTGGCCÁCGÁCGGCGTTCCTTGCGCÁGCTGTG
     10256
                                                     10315
Sbjct
     638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                     697
Query
          ĊŢĊĠĊĠŢŢĠŢĊĊĊŢĠĂĠĊĠĠĠĂĠĠĠĠĊŢĠĊŢĠĊŢĂŢŢĠĠĊĠĂĠŢĠĊĊĠĠĠĠĊĀĠ
    10316
                                                     10375
Sbjct
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
Ouerv
     698
          GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
     10376
                                                     10435
Sbjct
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
     758
                                                     817
         10436
                                                     10495
Sbjct
Query
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                     877
          ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
     10496
                                                     10555
Sbjct
     878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
Query
         Sbjct
     10556
                                                     10615
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                     997
Query
     938
          GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
Sbjct
    10616
                                                     10675
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Query
                                                     1057
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     10735
Sbjct
     10676
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     1117
Query
         10736
                                                     10795
Sbjct
    1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                     1177
Query
          ĊŤĊĠŤĠĊŤŤŤĂĊĠĠŤĂŤĊĠĊĊĠĊŤĊĊĊĠĂŤŤĊĠĊĂĠĊĠĊĂŤĊĠĊĊŤŤĊŤĂŤĊĠĊĊŤŤĊŤŤ
     10796
                                                     10855
Sbjct
    1178
         GACGAGTTCTTCTGAG
                      1193
Query
          GACGAGTTCTTCTGAG
     10856
                      10871
Sbjct
```

CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT

>gb|EU047752.1| Cloning vector pDC8, complete sequence Length=11987

Sort alignments for this E value Score Percen Query start position

```
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                 457
    398
Query
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Sbjct
    7100
                                                 7159
Query
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                 517
        7160
                                                 7219
Sbjct
Query
    518
        577
        7220
        72.79
Sbjct
        CAGGACGAGGCAGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
    578
                                                 637
Query
        CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
    7280
                                                 7339
Sbjct
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                 697
Query
    638
        7340
                                                 7399
Sbjct
Query
    698
        GATCTCCTGTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                 757
        7400
                                                 7459
Sbjct
        758
                                                 817
Query
    7460
                                                 7519
Sbjct
    818
                                                 877
Query
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
        7520
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                 7579
Sbjct
Query
    878
        GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                 937
        GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
    7580
                                                 7639
Sbjct
    938
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                 997
Query
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                 7699
Sbict
    7640
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                 1057
Query
        Sbjct
    7700
                                                 7759
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Query
                                                 1117
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
    7760
                                                 7819
Sbjct
Query
    1118
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                 1177
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
    7820
                                                 7879
Sbjct
    1178
        GACGAGTTCTTCTGAG
                    1193
Query
        7880
        GACGAGTTCTTCTGAG
                    7895
Sbjct
Score = 706 bits (382), Expect = 0.0 Identities = 382/382 (100%), Gaps = 0/382 (0%)
Strand=Plus/Minus
                                                  457
    398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Query
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  11190
    11249
Sbjct
    458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  517
Query
         Sbjct
    11189
                                                  11130
Query
    518
         577
         11129
Sbjct
         11070
```

```
Query
    578
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                     637
         11069
                                                     11010
Sbjct
         Query
    638
                                                     697
    11009
                                                     10950
Sbjct
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
Query
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
Sbjct
    10949
                                                     10890
         CGGCGGCTGCATACGCTTGATC
Query
    758
                          779
          CGGCGGCTGCATACGCTTGATC
Sbjct
    10889
                          10868
>gb|EU024548.1| Cloning vector pCPP5250, complete sequence
Length=5155
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                    457
Query
        2347
                                                    2406
Sbjct
    458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                    517
Query
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
    2407
                                                    2466
Sbjct
    518
         577
Query
         Sbjct
    2467
         2526
    578
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                    637
Query
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
    2527
                                                    2586
Sbjct
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    697
    638
Query
         2587
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    2646
Sbjct
Query
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                    757
        2647
                                                    2706
Sbjct
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    758
                                                    817
Query
    2707
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                    2766
Sbjct
    818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    877
Query
        2767
                                                    2826
Sbjct
    878
Query
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    937
         2827
         GÁGCÁTCÁGGGGCTCGCGCCÁGCCGÁÁCTGTTCGCCÁGGCTCÁÁGGCGCGCÁTGCCCGÁC
                                                    2886
Sbjct
    938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    997
Query
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    2946
    2887
Sbjct
Query
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                    1057
        2947
Sbjct
                                                    3006
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    1117
Query
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
    3007
                                                    3066
Sbjct
    1118
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    1177
Query
        Sbjct
    3067
                                                    3126
Query
    1178
        GACGAGTTCTTCTGAG
                     1193
         Sbjct
    3127
        GACGAGTTCTTCTGAG
                     3142
```

```
>gb|EU024546.1| Cloning vector pCPP5702, complete sequence
Léngth=8791
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                       457
Query
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Sbjct
     2827
                                                       2768
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
                                                       517
         GGCTÁTGÁCTGGGCÁCÁÁCAGÁCÁÁTCGGCTGCTCTGÁTGCCGCCGTGTTCCGGCTGTCÁ
     2767
                                                       2708
Sbjct
         577
Query
     518
         2707
         2648
Sbjct
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                       637
Query
     578
         Sbjct
     2647
                                                       2588
     638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                       697
Query
         2587
                                                       2528
Sbjct
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                       757
Query
         2527
                                                       2468
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                       817
Query
         Sbjct
     2467
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                       2408
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                       877
Query
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
     2407
                                                       2348
Sbjct
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
     878
                                                       937
Query
         2347
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                       2288
Sbjct
Query
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                       997
         2287
                                                       2228
Sbjct
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGTGTGGCGGACCGCTATCAGGAC
     998
                                                       1057
Query
     2227
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                       2168
Sbjct
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                       1117
Query
     1058
         2167
                                                       2108
Sbjct
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Query
     1118
                                                       1177
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                       2048
     2107
Sbjct
         GACGAGTTCTTCTGAG
                      1193
     1178
Query
         1111111111111111
         GACGAGTTCTTCTGAG
Sbjct
     2047
                      2032
>gb|EF437956.1| Expression vector pcDNA3-AQP4f, complete sequence
Length=6510
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                       457
Query
         Sbjct
     3215
                                                       3274
Query
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                       517
         Sbjct
     3275
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                       3334
```

```
577
Query
    518
         3394
    3335
Sbjct
        Query
    578
                                                   637
    3395
                                                   3454
Sbjct
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                   697
Query
    638
         Sbjct
    3455
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                   3514
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
Query
                                                    757
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
    3515
                                                   3574
Sbjct
    758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                   817
Query
        3575
                                                    3634
Sbjct
    818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                   877
Query
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
Sbjct
    3635
                                                   3694
    878
         GAGCATCAGGGGCTCGCGCCGACCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                   937
Query
        3754
Sbjct
    3695
        938
                                                   997
Query
    3755
                                                    3814
Sbjct
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                   1057
Query
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGCCGGACCGCTATCAGGAC
Sbjct
    3815
                                                   3874
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Query
    1058
                                                   1117
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
    3875
                                                   3934
Sbjct
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
    1118
                                                   1177
Query
         3935
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    3994
Sbjct
Query
    1178
        GACGAGTTCTTCTGAG
                     1193
        |||||||||||||||||||||||||||||||||GACGAGTTCTTCTGAG
    3995
Sbjct
                     4010
>qb|EF437953.1| Expression vector pcDNA3-AQP4e, complete sequence
Léngth=6675
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
                                                    457
Query
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                    3439
    3380
Sbjct
    458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                   517
Query
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                   3499
Sbjct
    3440
Query
    518
         577
        3500
                                                   3559
Sbjct
    578
         CAGGACGAGGCAGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                   637
Query
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                   3619
Sbjct
    3560
    638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                   697
Query
        Sbjct
    3620
                                                   3679
Query
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                    757
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
Sbjct
    3680
                                                   3739
```

```
758
Query
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
        3740
                                                   3799
Sbjct
        Query
    818
                                                   877
    3800
                                                   3859
Sbjct
        GAGCATCAGGGGCTCGCGCCGACCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
Query
    878
                                                   937
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
Sbjct
    3860
                                                   3919
    938
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
Query
                                                   997
         GGCGÁGGÁTCTCGTCGTGÁCCCÁTGGCGÁTGCCTGCTTGCCGÁÁTATCÁTGGTGGÁÁÁAT
    3920
                                                   3979
Sbjct
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                   1057
Query
         3980
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                   4039
Sbict
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                   1117
Query
        4099
Sbjct
    4040
    1118
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                   1177
Query
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
    4100
                                                   4159
Sbjct
    1178
        GACGAGTTCTTCTGAG
                     1193
Query
         4160
        GACGAGTTCTTCTGAG
                     4175
Sbjct
>qb|EF437951.1| Expression vector pcDNA3-AQP4d, complete sequence
Length=6349
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                   457
Query
         3054
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                   3113
Sbjct
Query
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                   517
        3114
                                                   3173
Sbjct
    518
        577
Query
         3174
        3233
Sbjct
    578
        CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                   637
Query
        3234
                                                   3293
Sbjct
Query
    638
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                   697
         3294
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                   3353
Sbjct
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                   757
Query
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                   3413
    3354
Sbjct
Query
    758
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                   817
        3414
                                                   3473
Sbjct
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                   877
Query
         ATCGÁGCGÁGCÁCGTÁCTCGGÁTGGÁÁGCCGGTCTTGTCGÁTCÁGGÁTGÁTCTGGÁCGÁÁ
Sbjct
    3474
                                                   3533
    878
        GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                   937
Query
        Sbjct
    3534
                                                   3593
Query
    938
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                   997
         Sbjct
    3594
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                   3653
```

```
998
                                                      1057
Query
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
         3713
     3654
Sbjct
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     1058
                                                      1117
Query
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     3714
                                                      3773
Sbjct
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                      1177
Query
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     3774
                                                      3833
Sbjct
     1178
Query
         GACGAGTTCTTCTGAG
                      1193
         GACGAGTTCTTCTGAG
Sbjct
     3834
                      3849
>gb|EF437950.1| Expression vector pcDNA3-K-AQP4d, complete sequence
Length=6161
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                      457
Query
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
     2866
                                                      2925
Sbjct
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                      517
Query
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
     2926
                                                      2985
Sbjct
     518
         577
Query
         Sbjct
     2986
         3045
     578
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                      637
Query
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
     3046
                                                      3105
Sbjct
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                      697
     638
Query
         3106
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                      3165
Sbjct
Query
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                      757
         3166
                                                      3225
Sbjct
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
     758
                                                      817
Query
     3226
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                      3285
Sbjct
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                      877
Query
         3286
                                                      3345
Sbjct
     878
Query
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                      937
         GÁGCÁTCÁGGGGCTCGCGCCÁGCCGÁÁCTGTTCGCCÁGGCTCÁÁGGCGCGCÁTGCCCGÁC
                                                      3405
     3346
Sbjct
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                      997
Query
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                      3465
     3406
Sbjct
Query
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                      1057
         3525
Sbjct
     3466
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                      1117
Query
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     3526
                                                      3585
Sbjct
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                      1177
Query
         Sbjct
     3586
                                                      3645
Query
     1178
         GACGAGTTCTTCTGAG
                      1193
         Sbjct
     3646
         GACGAGTTCTTCTGAG
                      3661
```

```
Pseudomonas aeruginosa PA7, complete genome
>qb|CP000744.1|
Length=6588339
Features in this part of subject sequence: aminoglycoside 3'-phosphotransferase
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
    398
           ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                        457
Query
           3858355
           ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                        385
Sbjct
Query
     458
           GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                        517
           ĠĠĊŦŔŦĠŔĊŦĠĠĠĊŔĊŔŔĊŔĠŔĊŔŔŦĊĠĠĊŦĠĊŦĊŦĠŔŦĠĊĊĠĊĠŦĠŦŦĊĊĠĠĊŦĠŦĊŔ
     3858295
                                                        385
Sbjct
           Query
     518
                                                        577
           385
     3858235
Sbjct
     578
           CAGGACGAGGCAGCGGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                        637
Query
           CÁGGÁCGÁGGCÁGCGCTÁTCGTGGCTGGCCÁCGACGGCGTTCCTTGCGCÁGCTGTG
Sbjct
     3858175
                                                        385
           CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                        697
Query
     638
           Sbjct
     3858115
                                                        385
           GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
Query
     698
                                                        757
           GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
     3858055
                                                        385
Sbjct
     758
           CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                        817
Query
           Sbjct
     3857995
                                                        385
     818
           ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                        877
Query
           3857935
                                                        385
Sbjct
           GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
     878
                                                        937
Query
           3857875
Sbjct
           GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                        385
     938
           GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                        997
Query
           3857815
                                                        385
Sbjct
     998
           GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCCGACCGCTATCAGGAC
                                                        105
Query
           385
Sbjct
     3857755
     1058
           ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                        111
Query
           3857695
                                                        385
Sbjct
Ouerv
     1118
           CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                        117
           3857635
           CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                        385
Sbjct
           GACGAGTTCTTCTGAG
Query
     1178
                        1193
           Sbjct
     3857575
           GACGAGTTCTTCTGAG
                        3857560
>gb|AY667410.1| Shuttle cosmid vector pHZ1358, complete sequence
Length=10848
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
    398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Query
```

```
Sbjct
    4245
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                   4186
                                                   517
Query
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
         4185
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                   4126
Sbjct
        577
Query
    518
        4066
    4125
Sbjct
    578
        CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                   637
Query
         CÁGGÁCGÁGGCÁGCGCTÁTCGTGGCTGGCCÁCGÁCGGCGTTCCTTGCGCÁGCTGTG
                                                   4006
    4065
Sbjct
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                   697
    638
Query
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
Sbjct
    4005
                                                   3946
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                   757
Query
        3886
    3945
Sbjct
        \tt CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    758
                                                   817
Query
        3826
Sbjct
    3885
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                   877
Query
        3825
                                                   3766
Sbjct
    878
        GAGCATCAGGGGCTCGCCCCGACCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                   937
Query
         3765
        GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                   3706
Sbjct
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                   997
Query
    938
         3705
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                   3646
Sbjct
Query
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                   1057
        Sbjct
    3645
                                                   3586
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Query
                                                   1117
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
    3585
                                                   3526
Sbjct
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Query
    1118
                                                   1177
         3525
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                   3466
Sbjct
Query
    1178
        GACGAGTTCTTCTGAG
                     1193
         GACGAGTTCTTCTGAG
    3465
                     3450
Sbjct
>emb|AM711972.1| Transposon mutagenesis vector pMiET
Length=7819
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                   457
Query
        6553
    6494
Sbjct
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                   517
Query
        6554
                                                   6613
Sbjct
Query
    518
        577
        6673
Sbjct
    6614
        CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
    578
                                                   637
Query
         6674
        CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                   6733
Sbjct
    638
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                   697
Query
```

```
6793
Sbjct
    6734
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
Query
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                  757
        6794
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                 6853
Sbjct
Query
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    758
                                                 817
        6854
                                                 6913
Sbjct
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                 877
Query
        6973
    6914
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
Sbjct
    878
        GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                 937
Query
        Sbjct
    6974
        GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                  7033
    938
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                 997
Query
        7093
    7034
Sbjct
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                 1057
Query
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
    7094
                                                  7153
Sbjct
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                 1117
Query
        7154
Sbjct
                                                  7213
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                 1177
Query
    1118
        7214
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                  7273
Sbjct
    1178
        GACGAGTTCTTCTGAG
                    1193
Query
        GACGAGTTCTTCTGAG
                    7289
Sbjct
>gb|EF550208.1| Cloning vector pcDNA3.1+PA, complete sequence
Length=7063
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  457
Query
    398
        3771
                                                  3830
Sbjct
Query
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  517
        3890
    3831
Sbjct
    518
        577
Query
        3950
    3891
Sbjct
Query
    578
        CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                  637
        3951
                                                  4010
Sbjct
        697
Query
    638
        4070
    4011
Sbjct
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                 757
Query
        4071
                                                  4130
Sbjct
Query
    758
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                 817
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                  4190
Sbjct
    4131
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                 877
    818
Query
        4191
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                  4250
Sbjct
    878
        GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                 937
Query
```

```
4310
Sbjct
     4251
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
    938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    997
Query
         4311
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    4370
Sbjct
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                    1057
Query
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
     4371
                                                    4430
Sbjct
    1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    1117
Query
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    4490
     4431
Sbjct
Query
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    1177
    1118
         Sbjct
     4491
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    4550
    1178
         GACGAGTTCTTCTGAG
Query
                     1193
         GACGAGTTCTTCTGAG
     4551
Sbjct
                      4566
>gb|EF192606.1| Cloning vector pBE0210, complete sequence
Length=28953
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
    398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     457
Query
          16387
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     16446
Sbjct
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     517
Query
          GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
    16447
                                                     16506
Sbjct
         Query
    518
          16507
         16566
Sbjct
Query
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                     637
     578
         16567
                                                     16626
Sbjct
    638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                     697
Query
          ĊŢĊĠĊĠŢŢĠŢĊĊĊŢĠĂĠĊĠĠĠĂĠĠĠĠĊŢĠĊŢĠĊŢĂŢŢĠĠĊĠĂĠŢĠĊĊĠĠĠĠĊĀĠ
    16627
                                                     16686
Sbjct
Query
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     757
         16687
                                                     16746
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     817
Query
          CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     16806
    16747
Sbjct
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                     877
Query
    818
          16807
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                     16866
Sbjct
    878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
Query
         16867
                                                     16926
Sbjct
    938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                     997
Query
          16927
                                                     16986
Sbjct
Query
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     1057
         16987
                                                     17046
Sbjct
    1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     1117
Query
          Sbjct
    17047
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     17106
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                     1177
Query
    1118
```

```
CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     17107
Sbjct
                                                        17166
     1178
          GACGAGTTCTTCTGAG
                       1193
Query
          17167
          GACGAGTTCTTCTGAG
                       17182
Sbjct
>qb|EF028675.1| Cloning vector pDV-NTAP-CYFP, complete sequence
Length=8003
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
                                                       457
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Query
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
     3062
                                                       3121
Sbjct
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
     458
                                                       517
         3122
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                       3181
Sbjct
         577
Query
     518
         3182
                                                       3241
Sbjct
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                       637
Query
     578
         3242
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                       3301
Sbjct
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                       697
Query
     638
         Sbjct
     3302
                                                       3361
Query
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                       757
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                       3421
     3362
Sbjct
         758
                                                       817
Query
                                                       3481
Sbjct
     3422
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                       877
Query
         Sbjct
     3482
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                       3541
     878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
Query
                                                       937
         3542
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                       3601
Sbjct
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                       997
Query
         3602
                                                       3661
Sbjct
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                       1057
Query
         Sbjct
     3662
                                                       3721
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     1058
                                                       1117
Query
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     3722
                                                       3781
Sbjct
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Query
     1118
                                                       1177
         Sbjct
     3782
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                       3841
Query
         GACGAGTTCTTCTGAG
     1178
                      1193
         3842
         GACGAGTTCTTCTGAG
                      3857
Sbjct
>qb|EF028674.1| Cloning vector pDV-NTAP-CGFP, complete sequence
Length=8003
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
Query 398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                      457
```

```
3121
    3062
Sbjct
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  517
Query
        3122
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  3181
Sbjct
    518
        577
Query
        3182
        3241
Sbjct
        CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
    578
                                                  637
Query
        Sbjct
    3242
                                                  3301
    638
        \verb|CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGTTTTGGGCGAAGTGCCGGGGCAG|\\
                                                  697
Query
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
Sbjct
    3302
                                                  3361
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                  757
Query
        3362
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                  3421
Sbjct
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                  817
Query
    758
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    3422
                                                  3481
Sbjct
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                  877
Query
    818
        3482
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                  3541
Sbjct
    878
        GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                  937
Query
        Sbjct
    3542
                                                  3601
Query
    938
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                  997
        GGCGÁGGÁTCTCGTCGTGÁCCCÁTGGCGÁTGCCTGCTTGCCGÁÁTATCÁTGGTGGÁÁÁAT
    3602
                                                  3661
Sbjct
        998
                                                  1057
Query
                                                  3721
Sbjct
    3662
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                  1117
Query
        Sbjct
    3722
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                  3781
        \verb|CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT|\\
Query
    1118
                                                  1177
         3782
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                  3841
Sbjct
    1178
        GACGAGTTCTTCTGAG
                    1193
Query
        1111111111111111
    3842
        GACGAGTTCTTCTGAG
                    3857
Sbjct
>gb|EF028673.1| Cloning vector pDV-CYFP-CTAP, complete sequence
Length=8021
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
Query
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  457
    398
        Sbjct
    3080
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  3139
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
    458
                                                  517
        GGCTÁTGÁCTGGGCÁCÁÁCAGÁCÁÁTCGGCTGCTCTGÁTGCCGCCGTGTTCCGGCTGTCÁ
                                                  3199
    3140
Sbjct
        577
    518
Query
        3200
        3259
Sbjct
Query
    578
        CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                  637
        Sbjct
    3260
                                                  3319
    638
Query
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                  697
```

```
3379
     3320
Sbjct
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     757
Query
         3380
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     3439
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     817
Query
         3440
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     3499
Sbjct
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
     818
                                                     877
Query
         3559
Sbjct
     3500
     878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
Query
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
     3560
                                                     3619
Sbjct
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                     997
     938
Query
         3620
                                                     3679
Sbjct
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Query
     998
                                                     1057
         3680
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     3739
Sbjct
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Query
     1058
                                                     1117
         3740
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     3799
Sbjct
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                     1177
Query
         3800
Sbjct
                                                     3859
Query
     1178
         GACGAGTTCTTCTGAG
                     1193
         1111111111111111
         GACGAGTTCTTCTGAG
     3860
                      3875
Sbjct
>gb|EF028672.1| Cloning vector pDV-CGFP-CTAP, complete sequence
Length=8021
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     457
Query
         3080
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     3139
Sbjct
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     517
Query
         3140
                                                     3199
Sbjct
     518
         577
Query
         Sbjct
     3200
                                                     3259
         578
                                                     637
Query
Sbjct
     3260
                                                     3319
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
     638
                                                     697
Query
         Sbjct
     3320
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                     3379
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     757
Query
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
     3380
                                                     3439
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     817
Query
         3440
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     3499
Sbjct
Query
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                     877
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
Sbjct
     3500
                                                     3559
Query
     878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
```

```
3619
     3560
Sbjct
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                        997
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
     938
Query
         3620
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                        3679
Sbjct
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        1057
Query
         3680
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        3739
Sbjct
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                        1117
Query
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     3740
                                                        3799
Sbjct
     1118
         \tt CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                        1177
Query
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     3800
                                                        3859
Sbjct
Query
     1178
         GACGAGTTCTTCTGAG
                       1193
         3860
         GACGAGTTCTTCTGAG
                       3875
Sbjct
>qb|EF028671.1| Cloning vector pDV-NYFP-CTAP, complete sequence
Length=8021
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                        457
Query
         3080
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                        3139
Sbjct
Query
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                        517
         GGCTÁTGÁCTGGGCÁCÁÁCAGÁCÁÁTCGGCTGCTCTGÁTGCCGCCGTGTTCCGGCTGTCÁ
     3140
                                                        3199
Sbjct
         518
                                                        577
Query
     3200
                                                        3259
Sbjct
     578
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                        637
Query
         Sbjct
     3260
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                        3319
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                        697
Query
     638
         3320
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                        3379
Sbjct
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                        757
Query
         3380
                                                        3439
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                        817
Query
         Sbjct
     3440
                                                        3499
     818
         \tt ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                        877
Query
         3500
                                                        3559
Sbjct
     878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                        937
Query
         Sbjct
     3560
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                        3619
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
Query
                                                        997
     938
         GGCGÁGGÁTCTCGTCGTGÁCCCÁTGGCGÁTGCCTGCTTGCCGÁÁTÁTCÁTGGTGGÁÁÁÁT
                                                        3679
     3620
Sbjct
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        1057
Query
         3680
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        3739
Sbjct
Query
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                        1117
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Sbjct
     3740
                                                        3799
Query
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                        1177
```

```
3800
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                       3859
Sbjct
     1178
         GACGAGTTCTTCTGAG
                      1193
Query
         3860
         GACGAGTTCTTCTGAG
                      3875
Sbjct
>qb|EF028670.1| Cloning vector pDV-NTAP-NYFP, complete sequence
Length=8003
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
                                                       457
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Query
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
     3062
                                                       3121
Sbjct
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
     458
                                                       517
         3122
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                       3181
Sbjct
         577
Query
     518
         3182
                                                       3241
Sbjct
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                       637
Query
     578
         3242
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                       3301
Sbjct
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                       697
Query
     638
         Sbjct
     3302
                                                       3361
Query
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                       757
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                       3421
     3362
Sbjct
         758
                                                       817
Query
                                                       3481
Sbjct
     3422
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                       877
Query
         Sbjct
     3482
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                       3541
     878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
Query
                                                       937
         3542
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                       3601
Sbjct
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                       997
Query
         3602
                                                       3661
Sbjct
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                       1057
Query
         Sbjct
     3662
                                                       3721
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     1058
                                                       1117
Query
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     3722
                                                       3781
Sbjct
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Query
     1118
                                                       1177
         Sbjct
     3782
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                       3841
Query
         GACGAGTTCTTCTGAG
     1178
                      1193
         3842
         GACGAGTTCTTCTGAG
Sbjct
                      3857
>gb|EF028669.1| Cloning vector pDV-CTAP, complete sequence
Léngth=7307
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
Query 398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                      457
```

```
2425
    2366
Sbjct
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  517
Query
         2426
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  2485
Sbjct
    518
        577
Query
         2486
        2545
Sbjct
        CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
    578
                                                  637
Query
        Sbjct
    2546
                                                  2605
    638
        \verb|CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGTTTTGGGCGAAGTGCCGGGGCAG|\\
                                                  697
Query
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
Sbjct
    2606
                                                  2665
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                   757
Query
        2666
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                  2725
Sbjct
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
    758
                                                  817
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    2726
                                                  2785
Sbjct
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                  877
Query
    818
         2786
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                  2845
Sbjct
    878
        GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                  937
Query
        2905
Sbjct
    2846
Query
    938
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                  997
         GGCGÁGGÁTCTCGTCGTGÁCCCÁTGGCGÁTGCCTGCTTGCCGÁÁTATCÁTGGTGGÁÁÁAT
    2906
                                                  2965
Sbjct
        998
                                                  1057
Query
    2966
                                                  3025
Sbjct
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                  1117
Query
        Sbjct
    3026
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                   3085
        \verb|CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT|\\
    1118
Query
                                                  1177
         3086
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                  3145
Sbjct
    1178
        GACGAGTTCTTCTGAG
                     1193
Query
         1111111111111111
    3146
        GACGAGTTCTTCTGAG
                     3161
Sbjct
>gb|EF028668.1| Cloning vector pDV-CYFP, complete sequence Length=7475
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
Query
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                   457
    398
        Sbjct
    2534
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                   2593
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
    458
                                                  517
         GGCTÁTGÁCTGGGCÁCÁÁCAGÁCÁÁTCGGCTGCTCTGÁTGCCGCCGTGTTCCGGCTGTCÁ
    2594
                                                  2653
Sbjct
        577
    518
Query
         2654
        2713
Sbjct
Query
    578
        CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                  637
        Sbjct
    2714
                                                  2773
Query
    638
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                  697
```

```
2833
     2774
Sbjct
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     757
Query
         2834
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     2893
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     817
Query
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
     2894
                                                     2953
Sbjct
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
     818
                                                     877
Query
         Sbjct
     2954
                                                     3013
     878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
Query
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
     3014
                                                     3073
Sbjct
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                     997
     938
Query
         3074
                                                     3133
Sbjct
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Query
     998
                                                     1057
         3134
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGCCGGACCGCTATCAGGAC
                                                     3193
Sbjct
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Query
     1058
                                                     1117
         3194
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     3253
Sbjct
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                     1177
Query
         3254
Sbjct
                                                     3313
Query
     1178
         GACGAGTTCTTCTGAG
                     1193
         111111111111111
         GACGAGTTCTTCTGAG
     3314
                      3329
Sbjct
>gb|EF028667.1| Cloning vector pDV-CGFP, complete sequence
Length=7475
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     457
Query
         2534
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     2593
Sbjct
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     517
Query
         2594
                                                     2653
Sbjct
     518
         577
Query
         2713
Sbjct
     2654
         578
                                                     637
Query
Sbjct
     2714
                                                     2773
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                     697
     638
Query
         Sbjct
     2774
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                     2833
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     757
Query
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     2893
     2834
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     817
Query
         2894
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     2953
Sbjct
Query
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                     877
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
Sbjct
     2954
                                                     3013
Query
     878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
```

```
3073
     3014
Sbjct
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                        997
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
     938
Query
         3074
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                        3133
Sbjct
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        1057
Query
         3134
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        3193
Sbjct
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                        1117
Query
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Sbjct
     3194
                                                        3253
     1118
         \tt CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                        1177
Query
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     3254
                                                        3313
Sbjct
Query
     1178
         GACGAGTTCTTCTGAG
                       1193
         3314
         GACGAGTTCTTCTGAG
                       3329
Sbjct
>gb|EF028666.1| Cloning vector pDV-NTAP, complete sequence
Length=7289
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                        457
Query
         2348
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                        2407
Sbjct
Query
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                        517
         GGCTÁTGÁCTGGGCÁCÁÁCAGÁCÁÁTCGGCTGCTCTGÁTGCCGCCGTGTTCCGGCTGTCÁ
                                                        2467
     2408
Sbjct
         518
                                                        577
Query
     2468
                                                        2527
Sbjct
     578
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                        637
Query
         Sbjct
     2528
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                        2587
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                        697
Query
     638
         2588
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                        2647
Sbjct
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                        757
Query
         2648
                                                        2707
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                        817
Query
         2767
Sbjct
     2708
     818
         \tt ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                        877
Query
         2768
                                                        2827
Sbjct
     878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                        937
Query
         Sbjct
     2828
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                        2887
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                        997
Query
     938
         GGCGÁGGÁTCTCGTCGTGÁCCCÁTGGCGÁTGCCTGCTTGCCGÁÁTATCÁTGGTGGÁÁÁAT
     2888
                                                        2947
Sbjct
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        1057
Query
         2948
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        3007
Sbjct
Query
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                        1117
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Sbjct
     3008
                                                        3067
Query
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                        1177
```

```
3068
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                       3127
Sbjct
     1178
         GACGAGTTCTTCTGAG
                      1193
Query
         3128
         GACGAGTTCTTCTGAG
                      3143
Sbjct
>qb|EF028665.1| Cloning vector pDV-NYFP, complete sequence
Length=7475
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
                                                       457
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Query
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
     2534
                                                       2593
Sbjct
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
     458
                                                       517
         2594
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                       2653
Sbjct
         577
Query
     518
         2654
                                                       2713
Sbjct
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                       637
Query
     578
         2714
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                       2773
Sbjct
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                       697
Query
     638
         2774
Sbjct
                                                       2833
Query
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                       757
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
     2834
                                                       2893
Sbjct
         758
                                                       817
Query
     2894
                                                       2953
Sbjct
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                       877
Query
         Sbjct
     2954
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                       3013
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
Query
     878
                                                       937
         3014
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                       3073
Sbjct
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                       997
Query
         3074
                                                       3133
Sbjct
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                       1057
Query
         Sbjct
     3134
                                                       3193
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     1058
                                                       1117
Query
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     3194
                                                       3253
Sbjct
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Query
     1118
                                                       1177
         Sbjct
     3254
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                       3313
Query
         GACGAGTTCTTCTGAG
     1178
                      1193
         3314
         GACGAGTTCTTCTGAG
Sbjct
                      3329
>qb|EF028664.1| Cloning vector EXP5(+), complete sequence
Length=6761
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
Query 398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                      457
```

```
1879
    1820
Sbjct
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  517
Query
        1880
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  1939
Sbjct
    518
        577
Query
        1940
        1999
Sbjct
        CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
    578
                                                  637
Query
        2000
                                                  2059
Sbjct
    638
        \verb|CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGTTTTGGGCGAAGTGCCGGGGCAG|\\
                                                  697
Query
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
Sbjct
    2060
                                                  2119
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                  757
Query
        2120
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                  2179
Sbjct
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
    758
                                                  817
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    2180
                                                  2239
Sbjct
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                  877
Query
    818
        2240
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                  2299
Sbjct
    878
        GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                  937
Query
        2300
                                                  2359
Sbjct
Query
    938
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                  997
        GGCGÁGGÁTCTCGTCGTGÁCCCÁTGGCGÁTGCCTGCTTGCCGÁÁTATCÁTGGTGGÁÁÁAT
    2360
                                                  2419
Sbjct
        998
                                                  1057
Query
    2420
                                                  2479
Sbjct
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                  1117
Query
        Sbjct
    2480
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                  2539
        \verb|CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT|\\
    1118
Query
                                                  1177
         2540
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                  2599
Sbjct
    1178
        GACGAGTTCTTCTGAG
                    1193
Query
        1111111111111111
    2600
        GACGAGTTCTTCTGAG
                    2615
Sbjct
>gb|EF028663.1| Cloning vector EXP4(+), complete sequence
Length=6724
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  457
    398
Query
        Sbjct
    1791
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  1850
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
    458
                                                  517
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
    1851
                                                  1910
Sbjct
        577
    518
Query
        1911
        1970
Sbjct
    578
Query
        CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                  637
        Sbjct
    1971
                                                  2030
Query
    638
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                  697
```

```
2090
     2031
Sbjct
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     757
Query
         2091
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     2150
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     817
Query
         2151
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     2210
Sbjct
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                     877
     818
Query
         2270
Sbjct
     2211
     878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
Query
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
Sbjct
     2271
                                                     2330
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                     997
Query
         2331
                                                     2390
Sbjct
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Query
     998
                                                     1057
         2391
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     2450
Sbjct
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Query
     1058
                                                     1117
         2451
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     2510
Sbjct
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                     1177
Query
         2511
Sbjct
                                                     2570
Query
     1178
         GACGAGTTCTTCTGAG
                     1193
         111111111111111
     2571
         GACGAGTTCTTCTGAG
                      2586
Sbjct
>gb|EF177812.1| Expression vector pUNIV, complete sequence
Length=5653
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     457
Query
         2644
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     2703
Sbjct
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     517
Query
         2704
                                                     2763
Sbjct
     518
         577
Query
         Sbjct
     2764
                                                     2823
         578
                                                     637
Query
Sbjct
     2824
                                                     2883
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
     638
                                                     697
Query
         Sbjct
     2884
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                     2943
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     757
Query
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
     2944
                                                     3003
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     817
Query
         3004
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     3063
Sbjct
Query
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                     877
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
Sbjct
     3064
                                                     3123
Query
     878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
```

```
3183
     3124
Sbjct
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                        997
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
     938
Query
          3184
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                        3243
Sbjct
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        1057
Query
          3244
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        3303
Sbjct
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                        1117
Query
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Sbjct
     3304
                                                        3363
     1118
         \tt CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                        1177
Query
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     3364
                                                        3423
Sbjct
     1178
         GACGAGTTCTTCTGAG
                       1193
Query
          3424
         GACGAGTTCTTCTGAG
                       3439
Sbjct
>qb|EF030522.1|
            Inducible protein expression vector pReg Neo, complete sequence
Length=6802
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                        457
Query
         3793
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                        3852
Sbjct
Query
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                        517
          GGCTÁTGÁCTGGGCÁCÁCAÁCAGÁCÁÁTCGGCTGCTCTGÁTGCCGCCGTGTTCCGGCTGTCÁ
     3853
                                                        3912
Sbjct
         518
                                                        577
Query
     3913
                                                        3972
Sbjct
     578
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                        637
Query
          Sbjct
     3973
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                        4032
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                        697
Query
     638
          4033
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                        4092
Sbjct
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                        757
Query
         4093
                                                        4152
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                        817
Query
         4212
Sbjct
     4153
     818
         \tt ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                        877
Query
         Sbjct
     4213
                                                        4272
     878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                        937
Query
          Sbjct
     4273
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                        4332
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                        997
Query
     938
          GGCGÁGGÁTCTCGTCGTGÁCCCÁTGGCGÁTGCCTGCTTGCCGÁÁTATCÁTGGTGGÁÁÁAT
     4333
                                                        4392
Sbjct
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        1057
Query
          4393
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        4452
Sbjct
Query
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                        1117
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Sbjct
     4453
                                                        4512
Query
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                        1177
```

```
4513
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                           4572
Sbjct
     1178
          GACGAGTTCTTCTGAG
                        1193
Query
          4573
          GACGAGTTCTTCTGAG
                        4588
Sbjct
>dbj|AB255435.1| Escherichia coli plasmid p086A1 DNA, complete sequence
Length=120730
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
           ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                             457
Query
     398
           1165
Sbjct
     116462
           GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
     458
                                                             517
Query
Sbjct
     116522
           GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                            1165
     518
           577
Query
           Sbjct
     116582
                                                            1166
           CAGGACGAGGCAGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
Query
     578
                                                             637
            116642
           CÁGGÁCGÁGCAGCGCGGCTÁTCGTGGCTGGCCÁCGACGGGCGTTCCTTGCGCÁGCTGTG
                                                            1167
Sbjct
           CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
Query
     638
                                                             697
            CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                            1167
Sbjct
     116702
     698
           GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                             757
Query
           116762
                                                             1168
Sbjct
           CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
     758
                                                             817
Query
            CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
     116822
                                                            1168
Sbjct
     818
           ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                             877
Query
           ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
     116882
                                                            1169
Sbjct
Query
     878
           GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                             937
            GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
Sbjct
     116942
                                                            1170
           GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
     938
                                                             997
Query
            GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
     117002
                                                            1170
Sbjct
           GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Query
     998
                                                             1057
            117062
           GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                             1171
Sbjct
           ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Query
     1058
                                                            1117
           117122
                                                            1171
Sbjct
           CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Query
     1118
                                                            1177
           CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     117182
                                                            1172
Sbjct
           GACGAGTTCTTCTGAG
                         1193
Query
     1178
            Sbjct
     117242
           GACGAGTTCTTCTGAG
                         117257
>qb|DQ886588.1| Expression vector pcDNA3-hFIX, complete sequence
Léngth=8223
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
```

```
Query
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  457
        4928
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                   4987
Sbjct
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  517
Query
        4988
                                                  5047
Sbjct
    518
        577
Query
         Sbjct
    5048
                                                  5107
    578
        CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                  637
Query
        5108
                                                  5167
Sbjct
    638
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGTTTGGGCGAAGTGCCGGGGCAG
                                                  697
Query
        5168
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                  5227
Sbjct
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                  757
Query
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
    5228
                                                  5287
Sbjct
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
    758
                                                  817
        5288
                                                  5347
Sbjct
Query
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                  877
        5348
                                                  5407
Sbjct
        878
                                                  937
Query
    5408
                                                  5467
Sbjct
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                  997
Query
    938
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
Sbjct
    5468
                                                  5527
Query
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                  1057
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                  5587
    5528
Sbjct
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                  1117
Query
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                  5647
Sbjct
    5588
    1118
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                  1177
Query
        Sbjct
    5648
                                                  5707
Query
    1178
        GACGAGTTCTTCTGAG
                    1193
        ||||||||||||||||||||||||||||||||GACGAGTTCTTCTGAG
    5708
                     5723
Sbjct
>gb|DQ898181.1|
           Keratinocyte expression vector phPK14H, complete sequence
Length=6815
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
                                                  457
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Query
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
    3520
                                                  3579
Sbjct
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
    458
        Sbjct
    3580
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  3639
Query
        577
    518
        3640
                                                  3699
Sbjct
    578
        CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                  637
Query
         Sbjct
    3700
        CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                  3759
```

```
Query
    638
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                697
        3760
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                3819
Sbjct
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                757
Query
        3820
                                                3879
Sbjct
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    758
                                                817
Query
        3880
Sbjct
                                                3939
Query
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                877
        3940
                                                3999
Sbjct
    878
        GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                937
Query
        4000
                                                4059
Sbjct
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                997
    938
Query
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
    4060
                                                4119
Sbjct
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                1057
Query
        4120
                                                4179
Sbjct
Query
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
    1058
                                                1117
        4180
                                                4239
Sbjct
        1118
                                                1177
Query
                                                4299
    4240
Sbjct
    1178
        GACGAGTTCTTCTGAG
                   1193
Query
        4300
        GACGAGTTCTTCTGAG
Sbjct
                    4315
>qb|DQ823233.1| Expression vector mce4, complete sequence
Length=29048
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Query
    398
                                                 457
         25966
                                                 26025
Sbjct
    458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                 517
Query
        26026
                                                 26085
Sbjct
    518
         577
Query
         26086
                                                 26145
Sbjct
Query
    578
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                 637
         26146
         CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                 26205
Sbjct
         Query
    638
                                                 697
         26206
                                                 26265
Sbjct
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                 757
Query
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
    26266
                                                 26325
Sbjct
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
    758
                                                 817
         Sbjct
    26326
                                                 26385
                                                877
Query
    818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
        26386
                                                 26445
Sbjct
```

```
878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
Query
         26446
                                                     26505
Sbjct
         Query
    938
                                                     997
    26506
                                                     26565
Sbjct
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     1057
Query
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Sbjct
    26566
                                                     26625
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Query
    1058
                                                     1117
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
    26626
                                                     26685
Sbjct
    1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                     1177
Query
         26686
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                     26745
Sbjct
    1178
         GACGAGTTCTTCTGAG
                     1193
Query
         ||||||||||||||||||||||||||||||||GACGAGTTCTTCTGAG
    26746
                      26761
Sbjct
>gb|DQ823232.1| Expression vector mce3, complete sequence
Length=38473
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
                                                     457
Query
    398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
         35391
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     35450
Sbjct
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
    458
                                                     517
         35451
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     35510
Sbjct
    518
         577
Query
         35511
         35570
Sbjct
    578
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                     637
Query
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
Sbjct
    35571
                                                     35630
Query
    638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                     697
         35631
                                                     35690
Sbjct
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     757
Query
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
    35691
                                                     35750
Sbjct
    758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     817
Query
         35751
                                                     35810
Sbjct
    818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                     877
Query
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
    35811
                                                     35870
Sbjct
    878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
Query
         35871
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     35930
Sbjct
    938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                     997
Query
         Sbjct
    35931
                                                     35990
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     1057
Query
         35991
                                                     36050
Sbjct
    1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     1117
Ouerv
```

```
Sbjct
     36051
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                        36110
Query
     1118
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                        1177
          36111
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                        36170
Sbjct
          GACGAGTTCTTCTGAG
Query
     1178
                       1193
          36171
          GACGAGTTCTTCTGAG
                       36186
Sbjct
>gb|DQ823231.1| Expression vector mce2, complete sequence
Length=24799
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
     398
          ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                        457
Query
          21776
Sbjct
     21717
          GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
     458
                                                        517
Query
          21777
                                                        21836
Sbjct
Query
     518
          577
          21837
                                                        21896
Sbjct
     578
          CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                        637
Query
          CÁGGÁCGÁGGCÁGCGCTÁTCGTGGCTGGCCÁCGÁCGGCGTTCCTTGCGCÁGCTGTG
     21897
                                                        21956
Sbjct
     638
          CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                        697
Query
          ĊŢĊĠĊĠŢŢĠŢĊĊĊŢĠĂĠĊĠĠĠĂĠĠĠĠĊŢĠĊŢĠĊŢĂŢŢĠĠĊĠĂĠŢĠĊĊĠĠĠĠĊĀĠ
     21957
                                                        22016
Sbjct
          GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
Query
     698
                                                        757
          22017
          GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                        22076
Sbjct
          CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
     758
                                                        817
          22077
                                                        22136
Sbjct
Query
     818
          ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                        877
          ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
     22137
                                                        22196
Sbjct
     878
          GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                        937
Query
          Sbjct
     22197
                                                        22256
          GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                        997
Query
     938
          GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
     22257
                                                        22316
Sbjct
     998
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        1057
Query
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        22376
Sbjct
     22317
     1058
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                        1117
Query
          22377
Sbjct
                                                        22436
     1118
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                        1177
Query
          ĊŤĊĠŤĠĊŤŤŤĂĊĠĠŤĂŤĊĠĊĊĠĊŤĊĊĊĠĂŤŤĊĠĊĂĠĊĠĊĂŤĊĠĊĊŤŤĊŤĂŤĊĠĊĊŤŤĊŤŤ
     22437
                                                        22496
Sbjct
     1178
          GACGAGTTCTTCTGAG
                       1193
Query
          ||||||||||||||||||||||||||||||||GACGAGTTCTTCTGAG
     22497
                       22512
Sbjct
>gb|DQ487156.1| Flexi vector pF5K CMV-neo, complete sequence
Length=4594
Score = 1471 bits (796), Expect = 0.0
```

```
Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                      457
    398
Query
         2409
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                      2468
Sbjct
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     517
Query
         2469
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                      2528
Sbjct
     518
         577
Query
         Sbjct
     2529
                                                     2588
     578
         {\tt CAGGACGAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG}
                                                     637
Query
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
     2589
                                                     2648
Sbjct
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                     697
     638
Query
         2649
                                                     2708
Sbjct
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
Query
     698
                                                      757
         GÁTCTCCTGTCÁTCTCÁCCTTGCTCCTGCCGÁGAÁÁGTÁTCCÁTCÁTGGCTGÁTGCÁÁTG
     2709
                                                     2768
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     817
Query
         2769
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     2828
Sbjct
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                     877
Query
         2829
Sbjct
                                                      2888
Query
     878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
         GAGCÁTCÁGGGGCTCGCGCCÁGCCGAÁCTGTTCGCCÁGGCTCÁAGGCGCGCÁTGCCCGÁC
                                                     2948
     2889
Sbjct
         938
                                                     997
Query
     2949
                                                     3008
Sbjct
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     1057
Query
         Sbjct
     3009
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                      3068
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Query
     1058
                                                     1117
         3069
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                      3128
Sbjct
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                     1177
Query
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     3129
                                                      3188
Sbjct
     1178
         GACGAGTTCTTCTGAG
                      1193
Query
         ||||||||||||||||||||||||||GACGAGTTCTTCTGAG
Sbjct
     3189
                      3204
>qb|DQ487155.1| Flexi vector pF5A CMV-neo, complete sequence
Léngth=5591
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                      457
Query
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     2425
     2366
Sbjct
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                      517
     458
Query
         2426
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     2485
Sbjct
Query
     518
         577
         Sbjct
     2486
                                                     2545
Query
     578
         CAGGACGAGGCAGCGGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                     637
```

```
2605
     2546
         CAGGACGAGCAGCGCGCTATCGTGGCTGCCACGACGGCGTTCCTTGCGCAGCTGTG
Sbjct
     638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                     697
Query
         2606
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                     2665
Sbjct
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     757
Query
         2666
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     2725
Sbjct
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
     758
                                                     817
Query
         2785
Sbjct
     2726
     818
         \tt ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                     877
Query
         ATCGÁGCGÁGCÁCGTÁCTCGGÁTGGÁÁGCCGGTCTTGTCGÁTCÁGGÁTGÁTCTGGÁCGÁÁ
Sbjct
     2786
                                                     2845
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
     878
                                                     937
Query
         2846
                                                     2905
Sbjct
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                     997
Query
     938
         2906
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                     2965
Sbjct
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     1057
Query
         2966
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     3025
Sbjct
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     1117
Query
         3026
Sbjct
                                                     3085
Query
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                     1177
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     3086
                                                     3145
Sbjct
    1178
         GACGAGTTCTTCTGAG
                      1193
Query
         GACGAGTTCTTCTGAG
     3146
Sbjct
                      3161
>gb|DQ487211.1| Flexi Vector pFN10A (ACT), complete sequence
Length=5867
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     457
Query
         2642
                                                     2701
Sbjct
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     517
Query
         2761
Sbjct
     2702
     518
         577
Query
         Sbjct
     2762
                                                     2821
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
     578
                                                     637
Query
         Sbjct
     2822
         CAGGACGAGCAGCGCGCTATCGTGGCTGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                     2881
         \verb|CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGTTTTGGGCGAAGTGCCGGGGCAG|
                                                     697
Query
     638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
     2882
                                                     2941
Sbjct
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     757
Query
         2942
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     3001
Sbjct
Query
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     817
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Sbjct
     3002
                                                     3061
Query
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                     877
```

```
3121
    3062
Sbjct
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
    878
         GAGCATCAGGGGCTCGCCCCGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    937
Query
         3122
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    3181
Sbjct
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
    938
                                                    997
Query
         3182
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    3241
Sbjct
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
    998
                                                    1057
Query
         Sbjct
    3242
                                                    3301
    1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    1117
Query
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
    3302
                                                    3361
Sbjct
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
    1118
                                                    1177
Query
         3362
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    3421
Sbjct
Query
    1178
         GACGAGTTCTTCTGAG
                     1193
         3422
Sbjct
         GACGAGTTCTTCTGAG
                     3437
>gb|DQ515893.1| HIS3/URA3 reporter vector pH3U3, complete sequence
Length=5834
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
Query
    398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                    457
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                    3205
    3264
Sbjct
        458
                                                    517
Query
    3204
                                                    3145
Sbjct
    518
         577
Query
         Sbjct
    3144
                                                    3085
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
Query
    578
                                                    637
         3084
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                    3025
Sbjct
    638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    697
Query
         3024
                                                    2965
Sbjct
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                    757
Query
         Sbjct
    2964
                                                    2905
         758
                                                    817
Query
Sbjct
    2904
                                                    2845
    818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
Query
         Sbjct
     2844
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    2785
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
Query
    878
                                                    937
         GAGCÁTCÁGGGGCTCGCGCCÁGCCGAÁCTGTTCGCCÁGGCTCÁAGGCGCGCÁTGCCCGÁC
                                                    2725
    2784
Sbjct
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    997
    938
Query
         2724
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    2665
Sbjct
Query
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                    1057
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Sbjct
    2664
                                                    2605
Query
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    1117
```

```
2545
    2604
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Sbjct
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                   1177
    1118
Query
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
    2544
                                                   2485
Sbjct
    1178
        GACGAGTTCTTCTGAG
                     1193
Query
         1111111111111111
        GACGAGTTCTTCTGAG
    2484
                     2469
Sbjct
>gb|DQ408591.1|
          Transposon mutagenesis vector pG18-STM, complete sequence
Length=7657
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                   457
    398
Query
        Sbjct
    4863
                                                   4922
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
    458
                                                   517
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                   4982
    4923
Sbjct
        577
Query
    518
         4983
        5042
Sbjct
    578
        CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                   637
Query
        Sbjct
    5043
                                                   5102
Query
    638
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                   697
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
    5103
                                                   5162
Sbjct
        698
                                                   757
Query
                                                   5222
Sbjct
    5163
    758
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                   817
Query
        Sbjct
    5223
                                                   5282
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                   877
Query
    818
         5283
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                   5342
Sbjct
        GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
    878
                                                   937
Query
        5343
                                                   5402
Sbjct
Query
    938
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                   997
        Sbjct
    5403
                                                   5462
        998
                                                   1057
Query
    5463
                                                   5522
Sbjct
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                   1117
Query
         Sbjct
    5523
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                   5582
        \verb|CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT|\\
Query
    1118
                                                   1177
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
    5583
                                                   5642
Sbjct
        GACGAGTTCTTCTGAG
    1178
                     1193
Query
         1111111111111111
Sbjct
    5643
        GACGAGTTCTTCTGAG
                     5658
```

>gb|AY817672.1| SIV vector pCLN8, complete sequence Length=19831

```
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
Query
    398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                 457
         14079
                                                 14020
Sbjct
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
    458
                                                 517
Query
         ĠĠĊŦŔŦĠŔĊŦĠĠĠĊŔĊŔŔĊŔĠŔĊŔŔŦĊĠĠĊŦĠĊŦĊŦĠŔŦĠĊĊĠĊĠŦĠŦŦĊĊĠĠĊŦĠŦĊŔ
Sbjct
    14019
                                                 13960
    518
         577
Query
         13959
                                                 13900
Sbjct
    578
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                 637
Query
         13899
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                 13840
Sbjct
         697
    638
Query
         ĊŢĊĠĊĠŢŢĠŢĊĊĊŢĠĂĠĊĠĠĠĂĠĠĠĠĊŢĠĊŢĠĊŢĂŢŢĠĠĊĠĂĠŢĠĊĊĠĠĠĠĊĀĠ
    13839
                                                 13780
Sbjct
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
Query
    698
                                                 757
         13779
                                                 13720
Sbjct
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
    758
                                                 817
         13719
                                                 13660
Sbjct
         818
                                                 877
Query
    13659
                                                 13600
Sbjct
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                 937
Query
    878
         Sbjct
    13599
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                 13540
Query
    938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                 997
         13480
    13539
Sbjct
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                 1057
Query
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Sbict
    13479
                                                 13420
    1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                 1117
Query
         Sbjct
    13419
                                                 13360
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Query
    1118
                                                 1177
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
    13359
                                                 13300
Sbjct
    1178
         GACGAGTTCTTCTGAG
                    1193
Query
         13299
         GACGAGTTCTTCTGAG
                    13284
Sbjct
>gb|AY266291.1| 💹 Escherichia coli/Mycobacteria shuttle vector pGB9.2, complete
sequence
Length=11441
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
Query
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                 457
        Sbjct
    334
                                                 393
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
                                                 517
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
    394
                                                 453
Sbjct
    518
Query
```

```
Sbjct
    454
         513
                                                    637
Query
    578
         CAGGACGAGGCAGCGGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
         514
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                    573
Sbjct
Query
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    697
    638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    633
    574
Sbjct
Query
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                    757
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
    634
                                                    693
Sbjct
    758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
                                                    817
         Sbjct
    694
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                    753
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    877
Query
    818
        754
                                                    813
Sbjct
    878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    937
Query
         GÁGCÁTCÁGGGGCTCGCGCCÁGCCGAACTGTTCGCCÁGGCTCAÁGGCGCGCÁTGCCCGÁC
                                                    873
Sbjct
    814
    938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    997
Query
        933
Sbjct
    874
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGCCGGACCGCTATCAGGAC
                                                    1057
Query
         934
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                    993
Sbjct
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
    1058
                                                    1117
Query
         ÁTAĞCĞTTĞĞCTÂCCCĞTĞATATTĞCTĞAAĞAĞCTTĞĞCĞĞCĞAATĞĞĞCTĞACCĞCTTC
    994
                                                    1053
Sbjct
    1118
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    1177
Query
        Sbjct
    1054
                                                    1113
Query
    1178
        GACGAGTTCTTCTGAG
                     1193
         GACGAGTTCTTCTGAG
    1114
                     1129
Sbjct
```

>gb|AY613997.1| Cloning vector pSRalphaneoR, complete sequence Length=6423

Sort alignments for this E value Score Percen Query start position

```
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  457
Query
        Sbjct
    3088
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  3029
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  517
Query
    458
        3028
                                                  2969
Sbjct
    518
        577
Query
        2968
                                                  2909
Sbjct
Query
    578
        CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                  637
        2908
        CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                  2849
Sbjct
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                  697
    638
Query
        2848
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                  2789
Sbjct
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                  757
Query
```

```
Sbjct
     2788
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     2729
Query
                                                     817
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
         CGGCGGCTGCÁTACGCTTGÁTCCGGCTÁCCTGCCCÁTTCGÁCCÁCCAÁGCGÁAÁCÁTCGC
     2728
                                                     2669
Sbjct
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                     877
Query
     818
         2609
     2668
Sbjct
Query
     878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
         2608
                                                     2549
Sbjct
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                     997
Query
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
Sbjct
     2548
                                                     2489
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     1057
Query
         Sbjct
     2488
                                                     2429
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     1117
Query
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     2369
Sbjct
     2428
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                     1177
Query
         2368
                                                     2309
Sbjct
     1178
         GACGAGTTCTTCTGAG
                      1193
Query
         Sbjct
     2308
         GACGAGTTCTTCTGAG
                      2293
Score = 1057 bits (572), Expect = 0.0 Identities = 572/572 (100\%), Gaps = 0/572 (0\%)
Strand=Plus/Plus
         1200
                                                     1259
Query
     101
                                                     160
Sbjct
     1260
         GCGTTTGTCTATATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGG
                                                     1319
Query
         Sbjct
     161
                                                     220
         AAACCTGGCCCTGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGA
                                                     1379
Query
     1320
         AAACCTGGCCCTGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGA
                                                     280
Sbjct
     221
     1380
         ATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAA
                                                     1439
Query
         281
         ATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAA
                                                     340
Sbjct
Query
     1440
         ACAACGTCTGTAGCGACCCTTTGCAGGCAGCGGAACCCCCCACCTGGCGACAGGTGCCTC
                                                     1499
         Sbjct
     341
                                                     400
         1500
                                                     1559
Query
     401
                                                     460
Sbjct
     1560
         GTTGTGAGTTGGATAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAG
                                                     1619
Query
         Sbjct
     461
         GTTGTGAGTTGGATAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAG
                                                     520
         GGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGC
Query
     1620
                                                     1679
         GGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGC
                                                     580
     521
Sbjct
         ACATGCTTTACATGTGTTTAGTCGAGGTTaaaaaaaaCGTCTAGGCCCCCCGAACCACGGG
                                                     1739
     1680
Query
         581
         ACATGCTTTACATGTGTTTAGTCGAGGTTAAAAAAACGTCTAGGCCCCCCGAACCACGGG
                                                     640
Sbjct
Query
     1740
         GACGTGGTTTTCCTTTGAAAAACACGATGATA
                                 1771
         GACGTGGTTTTCCTTTGAAAAACACGATGATA
Sbjct
     641
```

```
Score = 1057 bits (572), Expect = 0.0 Identities = 572/572 (100%), Gaps = 0/572 (0%)
Strand=Plus/Plus
     1200
         CCCTCTCCCTaaaaaaaaaaTAACGTTACTGGCCGAAGCCGCTTGGAATAAGGCCGGTGT
                                                       1259
Query
         787
Sbjct
                                                       846
     1260
         GCGTTTGTCTATATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGG
                                                       1319
Query
         ĠĊĠŤŤŤĠŤĊŤÁŤÁŤĠŤŤÁŤŤŤŤĊĊÁĊĊÁŤÁŤŤĠĊĊĠŤĊŤŤŤŤĠĠĊÁÁŤĠŤĠÁĠĠĠĊĊĊĠĠ
Sbjct
     847
                                                       906
Query
     1320
         AAACCTGGCCCTGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGA
                                                       1379
         907
                                                       966
Sbjct
Query
     1380
         ATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAA
                                                       1439
         967
                                                       1026
Sbjct
         ATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAA
         ACAACGTCTGTAGCGACCCTTTGCAGGCAGCGGAACCCCCCACCTGGCGACAGGTGCCTC
     1440
                                                       1499
Query
         1027
         ACAACGTCTGTAGCGACCCTTTGCAGGCAGCGGAACCCCCCACCTGGCGACAGGTGCCTC
                                                       1086
Sbjct
Query
     1500
         TGCGGCCAAAAGCCACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCCAGTGCCAC
                                                       1559
         1087
         TGCGGCCAAAAGCCACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCCAGTGCCAC
                                                       1146
Sbjct
Query
     1560
         GTTGTGAGTTGGATAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAG
                                                       1619
         1147
                                                       1206
Sbjct
         \tt GGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGC
     1620
                                                       1679
Query
         GGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGC
     1207
                                                       1266
Sbjct
                                                       1739
Query
     1680
         ACATGCTTTACATGTGTTTAGTCGAGGTTaaaaaaaCGTCTAGGCCCCCCGAACCACGGG
         Sbjct
     1267
         ACATGCTTTACATGTGTTTAGTCGAGGTTAAAAAAACGTCTAGGCCCCCCGAACCACGGG
                                                       1326
Query
     1740
         GACGTGGTTTTCCTTTGAAAAACACGATGATA
                                  1771
         GACGTGGTTTTCCTTTGAAAAACACGATGATA
     1327
                                  1358
Sbjct
>gb|AY613992.1|
            Cloning vector pSRalphaneo, complete sequence
Length=4542
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                       457
Query
     398
         ATGÁTTGÁACÁAGÁTGGÁTTGCÁCGCÁGGTTCTCCGGCCGCTTGGGTGGÁGÁGGCTÁTTC
     1207
                                                       1148
Sbjct
Query
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                       517
         1147
         ĠĠĊŦŔŦĠŔĊŦĠĠĠĊŔĊŔŔĊŔĠŔĊŔŔŦĊĠĠĊŦĠĊŦĊŦĠŔŦĠĊĊĠĊĊĠŦĠŦŦĊĊĠĠĊŦĠŦĊŔ
                                                       1088
Sbjct
     518
         577
Query
         1087
                                                       1028
Sbjct
     578
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                       637
Query
         CÁGGÁCGÁGGCÁGCGCTÁTCGTGGCTGGCCÁCGÁCGGCGTTCCTTGCGCÁGCTGTG
     1027
                                                       968
Sbjct
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
Query
     638
                                                       697
         Sbjct
     967
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                       908
Query
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
     698
                                                       757
         907
                                                       848
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                       817
Query
         Sbjct
     847
         CGGCGGCTGCÁTACGCTTGÁTCCGGCTÁCCTGCCCÁTTCGÁCCÁCCAÁGCGÁAÁCÁTCGC
                                                       788
```

```
Query
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    728
Sbjct
    787
    878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    937
Query
        727
Sbjct
                                                    668
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    997
    938
Query
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
Sbjct
    667
                                                    608
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                    1057
Query
         607
                                                    548
Sbjct
Query
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    1117
         547
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    488
Sbjct
        \tt CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
    1118
                                                    1177
Query
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
    487
                                                    428
Sbjct
Query
    1178
        GACGAGTTCTTCTGAG
         1111111111111111
         GACGAGTTCTTCTGAG
    427
                     412
Sbjct
>gb|AY286001.1| Cloning vector pHRE1-km, complete sequence
Length=9037
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
                  Expect = 0.0
Strand=Plus/Minus
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                    457
Query
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Sbjct
    3776
                                                    3717
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
    458
                                                    517
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
    3716
                                                    3657
Sbjct
    518
         577
Query
         3597
Sbict
    3656
    578
         CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                    637
Query
        Sbjct
    3596
                                                    3537
                                                    697
Query
    638
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
        3536
                                                    3477
Sbjct
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                    757
Query
        3476
                                                    3417
Sbjct
    758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                    817
Query
        3416
                                                    3357
Sbjct
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    877
Query
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
    3356
                                                    3297
Sbjct
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
Query
    878
                                                    937
         Sbjct
    3296
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    3237
Query
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    997
    938
        3236
                                                    3177
Sbjct
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                    1057
Query
         3176
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                    3117
Sbjct
```

```
Query
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    1117
         3116
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    3057
Sbjct
    1118
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    1177
Query
        3056
                                                    2997
Sbjct
    1178
        GACGAGTTCTTCTGAG
                     1193
Query
         2996
        GACGAGTTCTTCTGAG
Sbjct
                     2981
>gb|DQ059989.1| Cloning vector pSCR001, complete sequence
Length=10571
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
    398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                    457
Query
        7078
    7019
Sbjct
    458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                    517
Query
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Sbjct
    7079
                                                    7138
    518
         577
Query
        7139
                                                    7198
Sbjct
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
Query
    578
                                                    637
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
    7199
                                                    7258
Sbjct
        638
                                                    697
Query
                                                    7318
Sbjct
    7259
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                    757
Query
        7319
                                                    7378
Sbjct
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    758
                                                    817
Query
         Sbjct
    7379
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                    7438
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    877
Query
        7439
                                                    7498
Sbjct
    878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    937
Query
        7499
                                                    7558
Sbjct
                                                    997
    938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
Query
        7559
                                                    7618
Sbjct
Query
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                    1057
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
    7619
                                                    7678
Sbjct
Query
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
    1058
                                                    1117
        7679
                                                    7738
Sbjct
    1118
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    1177
Query
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    7798
    7739
Sbjct
Query
         GACGAGTTCTTCTGAG
                     1193
    1178
         1111111111111111
        GACGAGTTCTTCTGAG
Sbjct
    7799
                     7814
```

>gb|AY260554.1| Retrotransposon vector MEL/ELM, complete sequence Length=9945

Sort alignments for this E value Score Percen Query start position

```
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                    457
Query
         Sbjct
    5600
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                    5659
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
    458
                                                    517
         5719
    5660
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Sbjct
    518
        577
Query
         5720
         5779
Sbjct
    578
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                    637
Query
         CAGGACGAGGCAGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                    5839
Sbjct
    5780
    638
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    697
Query
         5840
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    5899
Sbjct
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                    757
Query
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
    5900
                                                    5959
Sbjct
    758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                    817
Query
         5960
Sbjct
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                    6019
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    877
Query
    818
         6020
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    6079
Sbjct
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    937
    878
Query
         6080
        GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    6139
Sbjct
Query
    938
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    997
        6140
                                                    6199
Sbjct
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                    1057
Query
         6200
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                    6259
Sbjct
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    1117
Query
         6260
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    6319
Sbjct
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Query
    1118
                                                    1177
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    6379
    6320
Sbjct
    1178
        GACGAGTTCTTCTGAG
                     1193
Query
         1111111111111111
    6380
        GACGAGTTCTTCTGAG
Sbjct
                     6395
Score = 1024 bits (554), Expect = 0.0 Identities = 559/561 (99%), Gaps = 1/561 (0%)
Strand=Plus/Plus
Query
    1211
         1270
         1249
        CCCCCCCTAACGTTACTGGCCGAAGCCGCTTGGAATAAGGCCGGTGTGCGTTTGTCTA
                                                    1308
Sbjct
        1271
                                                    1330
Query
         1309
        TATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGGAAACCTGGCCC
                                                    1368
Sbjct
    1331
        TGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGAATGCAAGGTCT
                                                    1390
Query
```

```
TGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGAATGCAAGGTCT
                                             1428
Sbjct
    1369
       1450
Query
    1391
       1429
       1488
       AGCGACCCTTTGCAGGCAGCGGAACCCCCCACCTGGCGACAGGTGCCTCTGCGGCCAAAA
                                             1510
Query
    1451
       1489
                                             1548
Sbjct
Query
    1511
       GCCACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCCAGTGCCACGTTGTGAGTTG
                                             1570
       1549
       GCCÁCGTGTÁTAAGATÁCACCTGCAAAGGCGGCÁCAACCCCAGTGCCÁCGTTGTGAGTTG
                                             1608
Sbjct
       GATAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAGGGGCTGAAGGA
                                             1630
Query
    1571
       GATAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAGGGGCTGAAGGA
Sbjct
    1609
                                             1668
    1631
       TGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGCACATGCTTTAC
                                             1690
Query
       Sbjct
    1669
                                             1728
       1691
                                             1750
Query
                                             1787
Sbjct
    1729
Query
    1751
       CCTTTGAAAAACACGATGATA
                     1771
       1788
       CCTTTGAAAAACACGATAATA
                     1808
Sbjct
```

>gb|AY260553.1| Retrotransposon vector ELM 5, complete sequence Length=10047

Sort alignments for this E value Score Percen Query start position

Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%) Strand=Plus/Plus

Query	398	ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC	457
Sbjct	5651	ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC	5710
Query	458	GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA	517
Sbjct	5711	GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA	5770
Query	518	GCGCAGGGGCCCCGGTTCTTTTGTCAAGACCGACCTGTCCGGTGCCCTGAATGAA	577
Sbjct	5771	GCGCAGGGGCCCCGGTTCTTTTGTCAAGACCGACCTGTCCGGTGCCCTGAATGAA	5830
Query	578	CAGGACGAGGCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG	637
Sbjct	5831	CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG	5890
Query	638	CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG	697
Sbjct	5891	CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG	5950
Query	698	GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG	757
Sbjct	5951	GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG	6010
Query	758	CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC	817
Sbjct	6011	CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC	6070
Query	818	ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA	877
Sbjct	6071	ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA	6130
Query	878	GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC	937
Sbjct	6131	GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC	6190
Query	938	GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT	997

```
6191
                                                           6250
Sbjct
          GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                           1057
     998
Query
          6251
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                           6310
Sbjct
     1058
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                           1117
Query
          6311
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                           6370
Sbjct
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     1118
                                                           1177
Query
          Sbjct
     6371
                                                           6430
     1178
          GACGAGTTCTTCTGAG
                        1193
Query
          GACGAGTTCTTCTGAG
     6431
                        6446
Sbjct
Score = 1024 bits (554), Expect = 0.0 Identities = 559/561 (99\%), Gaps = 1/561 (0\%)
Strand=Plus/Plus
          cocccccctAACGTTACTGCCGAAGCCGCTTGGAATAAGGCCGGTGTGCGTTTGTCTA
                                                           1270
Query
     1211
          1300
          CCCCCCCTAACGTTACTGGCCGAAGCCGCTTGGAATAAGGCCGGTGTGCGTTTGTCTA
                                                           1359
Sbjct
Query
     1271
          TATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGGAAACCTGGCCC
                                                           1330
          1360
                                                           1419
Sbjct
     1331
          TGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGAATGCAAGGTCT
                                                           1390
Query
          TGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGAATGCAAGGTCT
     1420
                                                           1479
Sbjct
     1391
          GTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAACAACGTCTGT
                                                           1450
Query
          Sbjct
     1480
          GTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAACAACGTCTGT
                                                           1539
Query
     1451
          AGCGACCCTTTGCAGGCAGCGGAACCCCCCACCTGGCGACAGGTGCCTCTGCGGCCAAAA
                                                           1510
          1540
          AGCGACCCTTTGCAGGCAGCGGAACCCCCACCTGGCGACAGGTGCCTCTGCGGCCAAAA
                                                           1599
Sbjct
     1511
          GCCACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCCAGTGCCACGTTGTGAGTTG
                                                           1570
Query
          1600
          GCCACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCCAGTGCCACGTTGTGAGTTG
                                                           1659
Sbict
     1571
          GATAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAGGGGCTGAAGGA
                                                           1630
Query
          Sbjct
     1660
                                                           1719
                                                           1690
Query
     1631
          TGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGCACATGCTTTAC
          TGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGCACATGCTTTAC
     1720
                                                           1779
Sbjct
          \tt ATGTGTTTAGTCGAGGTTaaaaaaaaaCGTCTAGGCCCCCGAACCACGGGGACGTGGTTTT
Query
     1691
                                                           1750
          1780
                                                           1838
Sbjct
     1751
          CCTTTGAAAAACACGATGATA
                            1771
Query
          1839
          CCTTTGAAAAACACGATAATA
                            1859
Sbjct
>qb|AY037297.1| Synthetic construct erythromycin resistance protein (erm) gene,
partial cds; and streptomycin 3'-phosphotransferase (sph),
bleomycin phosphotransferase (ble), neomycin phosphotransferase (nptII), and gentamycin resistance protein (aac) genes,
complete cds
Length=7080
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
          \tt ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
     398
                                                           457
Query
          ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                           4681
Sbjct
```

```
Query
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  517
        4680
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  4621
Sbict
    518
        577
Query
        4561
Sbjct
    4620
        CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
    578
                                                  637
Query
         ĊĂĠĠĂĊĠĂĠĠĊĀĠĊĠĊĠĠĊŦĂŤĊĠŦĠĠĊŦĠĠĊĊĂĊĠĂĊĠĠĠĊĠŦŦĊĊŦŦĠĊĠĊĀĠĊŦĠŦĠ
Sbjct
    4560
                                                  4501
    638
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                  697
Query
        4500
                                                  4441
Sbjct
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
Query
    698
                                                  757
        4440
                                                  4381
Sbjct
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    758
                                                  817
Query
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    4380
                                                  4321
Sbjct
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                  877
Query
    818
        4320
                                                  4261
Sbjct
Query
        GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
    878
                                                  937
        4260
                                                  4201
Sbjct
        938
                                                  997
Query
    4200
                                                  4141
Sbjct
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                  1057
Query
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Sbjct
    4140
                                                  4081
Query
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                  1117
        4080
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                  4021
Sbjct
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                  1177
    1118
Query
        4020
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                  3961
Sbict
    1178
        GACGAGTTCTTCTGAG
                    1193
Query
        |||||||||||||||||||||||||GACGAGTTCTTCTGAG
Sbjct
    3960
                     3945
```

>gb|AF264696.2| Cloning vector pFB-ERV, complete sequence Length=11065

Sort alignments for this E value Score Percen Query start position

```
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                 457
Query
    398
        7575
                                                 7634
Sbjct
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                 517
Query
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                 7694
    7635
Sbjct
Query
        577
    518
        Sbjct
    7695
                                                 7754
Query
    578
        CAGGACGAGGCAGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                 637
        7755
                                                 7814
Sbjct
```

```
Query
                                                      697
     638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
         7815
                                                      7874
Sbjct
         698
                                                      757
Query
     7875
                                                      7934
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                      817
Query
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                      7994
     7935
Sbjct
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
Query
                                                      877
         8054
     7995
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
Sbjct
     878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                      937
Query
         8055
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                      8114
Sbjct
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                      997
Query
         8174
Sbjct
     8115
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                      1057
Query
         8175
                                                      8234
Sbjct
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                      1117
Query
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     8235
                                                      8294
Sbjct
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     1118
                                                      1177
Query
         Sbjct
     8295
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                      8354
         GACGAGTTCTTCTGAG
                      1193
Query
     1178
         111111111111111
     8355
         GACGAGTTCTTCTGAG
                      8370
Sbjct
Score = 1046 bits (566), Expect = 0.0 Identities = 571/573 (99%), Gaps = 2/573 (0%)
Strand=Plus/Plus
         CCCTCTCCCTcccccccccccTAACGTTACTGGCCGAAGCCGCTTGGAATAAGGCCGGTGT
                                                      1259
Query
     1200
         4968
                                                      5027
Sbjct
Query
     1260
         GCGTTTGTCTATATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGG
                                                      1319
         5028
                                                      5087
Sbjct
     1320
         AAACCTGGCCCTGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGA
                                                      1379
Query
         ÄÄÄCCTGGCCCTGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGA
     5088
                                                      5147
Sbjct
Query
     1380
         ATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAA
                                                      1439
         5148
         ATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAA
                                                      5207
Sbjct
     1440
         ACAACGTCTGTAGCGACCCTTTGCAGGCAGCGGAACCCCCACCTGGCGACAGGTGCCTC
                                                      1499
Query
         5208
                                                      5267
Sbjct
     1500
         TGCGGCCAAAAGCCACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCCAGTGCCAC
                                                      1559
Query
         TGCGGCCAAAAGCCACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCCAGTGCCAC
     5268
                                                      5327
Sbjct
Query
     1560
         GTTGTGAGTTGGATAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAG
                                                      1619
         5328
         GTTGTGAGTTGGATAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAG
                                                      5387
Sbjct
         GGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGC
     1620
                                                      1679
Query
         5388
         GGGCTGAAGGATGCCCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGC
                                                      5447
Sbjct
     1680
         ACATGCTTTACATGTGTTTAGTCGAGGTTaaaaaaaCGTCTAGGCCCCCCGAACCACGGG
                                                      1739
Query
```

```
Sbjct
     5448
         ACATGCTTTACATGTGTTTAGTCGAGGTTAAAAAA-CGTCTAGGCCCCCCGAACCACGGG
                                                      5506
Query
     1740
         GACGTGGTTTTCCTTTGAAAAACACGAT-GATA 1771
         Sbjct
     5507
         GACGTGGTTTTCCTTTGAAAAACACGATCGATA
                                   5539
Score = 913 bits (494), Expect = 0.0 Identities = 497/498 (99%), Gaps = 1/498 (0%)
Strand=Plus/Plus
         GTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGGAAACCTGGCCCTGT
Query
    1274
                                                      1333
         6975
Sbjct
                                                      7034
     1334
         \verb|CTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGAATGCAAGGTCTGTT|\\
                                                      1393
Query
         Sbjct
     7035
                                                      7094
     1394
         GAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAACAACGTCTGTAGC
                                                      1453
Query
         7095
         7154
Sbjct
Query
         GACCCTTTGCAGGCAGCGGAACCCCCCACCTGGCGACAGGTGCCTCTGCGGCCAAAAGCC
     1454
                                                      1513
         GACCCTTTGCAGGCAGCGGAACCCCCCACCTGGCGACAGGTGCCTCTGCGGCCAAAAGCC
     7155
                                                      7214
Sbjct
         ACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCCAGTGCCACGTTGTGAGTTGGAT
                                                      1573
Query
     1514
         7215
         ACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCCAGTGCCACGTTGTGAGTTGGAT
                                                      7274
Sbjct
     1574
         AGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAGGGGCTGAAGGATGC
                                                      1633
Query
         7275
Sbjct
                                                      7334
Query
     1634
         CCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGCACATGCTTTACATG
                                                      1693
         CCAGAAGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGCACATGCTTTACATG
     7335
                                                      7394
Sbjct
         1694
                                                      1753
Query
     7395
                                                      7453
Sbjct
     1754
         TTGAAAAACACGATGATA 1771
Query
         Sbjct
     7454
         TTGAAAAACACGATGATA
                        7471
>gb|DQ092437.1| Insertion vector pWSMK-T, complete sequence
Length=15969
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                      457
Query
         7376
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                      7435
Sbjct
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
     458
                                                      517
         7436
                                                      7495
Sbjct
         Query
     518
                                                      577
     7496
                                                      7555
Sbjct
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
Query
     578
         CAGGACGAGCAGCGCGCTATCGTGGCTGCCACGACGGCGTTCCTTGCGCAGCTGTG
Sbjct
     7556
                                                      7615
Query
     638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                      697
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                      7675
Sbjct
     7616
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                      757
Query
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                      7735
Sbjct
     7676
```

```
Query
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                      817
         7736
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                      7795
Sbjct
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                      877
Query
         7796
                                                      7855
Sbjct
     878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                      937
Query
         ĠĂĠĊĂŤĊĂĠĠĠĠĊŤĊĠĊĠĊĊĂĠĊĊĠĂĂĊŤĠŤŤĊĠĊĊĂĠĠĊŤĊĂĂĠĠĊĠĊĠĊĂŤĠĊĊĊĠĂĊ
Sbjct
     7856
                                                      7915
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                      997
Query
         7916
                                                      7975
Sbjct
Query
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                      1057
         7976
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                      8035
Sbjct
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     1058
                                                      1117
Query
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     8036
                                                      8095
Sbjct
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Query
     1118
                                                      1177
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     8096
                                                      8155
Sbjct
Query
     1178
         GACGAGTTCTTCTGAG
                      1193
         ||||||||||||||||||||||||||||||||GACGAGTTCTTCTGAG
     8156
                      8171
Sbjct
>qb|AF504908.1| Cloning vector pBBRT, complete sequence
Léngth=5973
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
Query
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                      457
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                      4628
Sbjct
     4687
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                      517
Query
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Sbict
     4627
                                                      4568
     518
         577
Query
         Sbjct
     4567
                                                      4508
                                                      637
Query
     578
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
         CÁGGÁCGÁGGCÁGCGCTÁTCGTGGCTGGCCÁCGÁCGGCGTTCCTTGCGCÁGCTGTG
     4507
                                                      4448
Sbjct
     638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                      697
Query
         4447
                                                      4388
Sbjct
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                      757
Query
         4387
                                                      4328
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                      817
Query
         CGGCGGCTGCÁTACGCTTGÁTCCGGCTÁCCTGCCCÁTTCGÁCCÁCCAÁGCGÁAÁCÁTCGC
     4327
                                                      4268
Sbjct
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
Query
     818
         Sbjct
     4267
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                      4208
Query
         GAGCATCAGGGGCTCGCGCCGACCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                      937
     878
         4207
                                                      4148
Sbjct
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                      997
Query
         4147
                                                      4088
Sbjct
```

```
Query
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     1057
         4087
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     4028
Sbict
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     1117
Query
         4027
Sbjct
                                                     3968
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                     1177
Query
         ĊŤĊĠŤĠĊŤŤŤĂĊĠĠŤĂŤĊĠĊĊĠĊŤĊĊĊĠĂŤŤĊĠĊĂĠĊĠĊĂŤĊĠĊĊŤŤĊŤĂŤĊĠĊĊŤŤĊŤŤ
Sbjct
     3967
                                                     3908
     1178
         GACGAGTTCTTCTGAG
                      1193
Query
         1111111111111111
         GACGAGTTCTTCTGAG
     3907
                      3892
Sbjct
>gb|AY062236.1|
            Transformation vector pRLE6, complete sequence
Length=5844
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     457
Query
         366
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     425
Sbjct
Query
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     517
         426
                                                     485
Sbjct
         518
                                                     577
Query
Sbjct
     486
                                                     545
         CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                     637
Query
     578
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
Sbjct
     546
                                                     605
Query
     638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                     697
         ĊŢĊĠĊĠŢŢĠŢĊĊĊŢĠĂĠĊĠĠĠĂĠĠĠĠĊŢĠĊŢĠĊŢĂŢŢĠĠĊĠĂĠŢĠĊĊĠĠĠĠĊĀĠ
     606
                                                     665
Sbjct
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     757
Query
         725
Sbjct
     666
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     817
Query
         Sbjct
     726
                                                     785
                                                     877
Query
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
         786
                                                     845
Sbjct
     878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
Query
         846
                                                     905
Sbjct
Query
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                     997
         906
                                                     965
Sbjct
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     1057
Query
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
     966
                                                     1025
Sbjct
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Query
     1058
                                                     1117
         Sbjct
     1026
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     1085
Query
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     1118
                                                     1177
         1086
                                                     1145
Sbjct
    1178
         GACGAGTTCTTCTGAG
                     1193
Query
         Sbjct
     1146
         GACGAGTTCTTCTGAG
                      1161
```

```
Synthetic construct plasmid pcDNA3-Rluc, complete sequence
>gb|AF416990.1|
Length=6394
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                      457
Query
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Sbjct
     3099
                                                      3158
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                      517
Query
         3159
                                                      3218
Sbjct
Query
     518
         577
         3219
         3278
Sbjct
         CAGGACGAGGCAGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
     578
                                                      637
Query
         3279
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                      3338
Sbjct
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                      697
Query
     638
         ĊŢĊĠĊĠŢŢĠŢĊĊĊŢĠĂĠĊĠĠĠĂĠĠĠĠĊŢĠĊŢĠĊŢĂŢŢĠĠĊĠĂĠŢĠĊĊĠĠĠĠĊĀĠ
     3339
                                                      3398
Sbjct
     698
         GATCTCCTGTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                      757
Query
         3399
                                                      3458
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                      817
Query
         3459
                                                      3518
Sbjct
Query
                                                      877
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
         Sbjct
     3519
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                      3578
Query
     878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                      937
         3579
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                      3638
Sbjct
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                      997
Query
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                      3698
Sbict
     3639
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                      1057
Query
         Sbjct
     3699
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGCCGGACCGCTATCAGGAC
                                                      3758
Query
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                      1117
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     3759
                                                      3818
Sbjct
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                      1177
Query
         3819
         ĊŤĊĠŤĠĊŤŤŤÁĊĠĠŤAŤĊĠĊĊĠĊŤĊĊĊĠAŤŤĊĠĊĀĠĊĠĊĂŤĊĠĊĊŦŦĊŦAŦĊĠĊĊŦŦĊŦŦ
                                                      3878
Sbjct
     1178
         GACGAGTTCTTCTGAG
                      1193
Query
         3879
         GACGAGTTCTTCTGAG
                      3894
Sbjct
>qb|AY181092.1|
            Synthetic construct S1 promoter-nptII gene-S3 terminator cassett
Length=1688
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Query
     398
                                                      457
         604
     545
Sbjct
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                      517
Query
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
     605
                                                      664
Sbjct
```

Query

518

577

```
Sbjct
    665
        724
    578
        CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                  637
Query
        725
                                                  784
Sbjct
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                  697
    638
Query
        Sbjct
    785
                                                  844
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                  757
Query
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
    845
                                                  904
Sbjct
Query
    758
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                  817
        905
                                                  964
Sbjct
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
    818
                                                  877
Query
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
    965
                                                  1024
Sbjct
        GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                  937
Query
    878
        1025
                                                  1084
Sbjct
Query
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                  997
    938
        1085
                                                  1144
Sbjct
        998
                                                  1057
Query
                                                  1204
    1145
Sbjct
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                  1117
Query
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Sbjct
    1205
                                                  1264
        \verb|CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT|\\
Query
    1118
                                                  1177
        ĊŤĊĠŤĠĊŤŤŤĂĊĠĠŤĂŤĊĠĊĊĠĊŤĊĊĊĠĂŤŤĊĠĊĂĠĊĠĊĂŤĊĠĊĊŤŤĊŤĂŤĊĠĊĊŤŤĊŤŤ
                                                  1324
    1265
Sbjct
    1178
        GACGAGTTCTTCTGAG
                    1193
Query
        1111111111111111
    1325
        GACGAGTTCTTCTGAG
Sbjct
                    1340
>qb|AY159034.1| Cloning vector pPLEX-4004, complete sequence
Length=12880
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
    398
                                                   457
Query
         11745
                                                   11804
Sbjct
Query
    458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                   517
         11805
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                   11864
Sbjct
         Query
    518
                                                   577
         11865
                                                   11924
Sbjct
    578
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                   637
Query
         CÁGGÁCGÁGGCÁGCGCTÁTCGTGGCTGGCCÁCGÁCGGCGTTCCTTGCGCÁGCTGTG
                                                   11984
    11925
Sbjct
Query
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                   697
    638
         Sbjct
    11985
                                                   12044
Query
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                   757
         12045
                                                   12104
Sbjct
```

```
758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     817
Query
         12105
                                                     12164
Sbjct
         Query
    818
                                                     877
    12165
                                                     12224
Sbjct
    878
         GAGCATCAGGGGCTCGCGCCGACCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
Query
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
Sbjct
    12225
                                                     12284
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
Query
    938
                                                     997
         GGCGÁGGÁTCTCGTCGTGÁCCCÁTGGCGÁTGCCTGCTTGCCGÁÁTÁTCÁTGGTGGÁÁÁÁT
                                                     12344
    12285
Sbjct
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     1057
Query
         12345
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     12404
Sbjct
    1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     1117
Query
         Sbjct
    12405
                                                     12464
    1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                     1177
Query
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
    12465
Sbjct
                                                     12524
    1178
         GACGAGTTCTTCTGAG
                     1193
Query
         12525
         GACGAGTTCTTCTGAG
                      12540
Sbjct
>qb|AY159033.1| Cloning vector pPLEX-4003, complete sequence
Length=12388
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
    398
Query
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     457
         11253
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     11312
Sbjct
    458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     517
Query
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Sbjct
    11313
                                                     11372
Query
    518
         577
         11432
Sbjct
    11373
    578
         CAGGACGAGGCAGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
Query
                                                     637
         11433
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                     11492
Sbjct
    638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                     697
Query
         11552
Sbjct
    11493
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     757
Query
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
    11553
                                                     11612
Sbjct
    758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     817
Query
         11613
                                                     11672
Sbjct
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
    818
                                                     877
Query
         Sbjct
    11673
                                                     11732
    878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
Query
          GÁGCÁTCÁGGGGCTCGCGCCÁGCCGÁÁCTGTTCGCCÁGGCTCÁÁGGCGCGCÁTGCCCGÁC
    11733
                                                     11792
Sbjct
    938
                                                     997
Query
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
```

```
Sbjct
     11793
          GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                      11852
Query
     998
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                      1057
          11853
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                      11912
Sbjct
Query
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     1058
                                                      1117
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     11913
                                                      11972
Sbjct
     1118
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                      1177
Query
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                      12032
     11973
Sbjct
                      1193
Query
     1178
          GACGAGTTCTTCTGAG
          1111111111111111
          GACGAGTTCTTCTGAG
                      12048
Sbjct
     12033
>qb|AY159032.1| Cloning vector pPLEX-4002, complete sequence
Length=12825
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
Query
    398
          ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                      457
          11690
                                                      11749
Sbjct
     458
          GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                      517
Query
          GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
     11750
                                                      11809
Sbjct
     518
          577
Query
          11810
                                                      11869
Sbjct
          CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
Query
     578
          11870
          CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                      11929
Sbjct
Query
          CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                      697
     638
          11930
                                                      11989
Sbjct
Query
     698
          GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                      757
          GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
     11990
                                                      12049
Sbjct
     758
          CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                      817
Query
          12050
                                                      12109
Sbjct
          ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                      877
Query
     818
          ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
     12110
                                                      12169
Sbjct
     878
          GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                      937
Query
          12170
          GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                      12229
Sbjct
     938
          GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                      997
Query
          12230
                                                      12289
Sbjct
     998
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                      1057
Query
          ĠĠĊĊĠĊŤŤŤŤĊŤĠĠĂŤŤĊĂŤĊĠÁĊŤĠŤĠĠĊĊĠĠĊŤĠĠĠŤĠŤĠĠĊĠĠĂĊĊĠĊŤÁŤĊĂĠĠĂĊ
     12290
                                                      12349
Sbjct
     1058
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                      1117
Query
          12350
                                                      12409
Sbjct
     1118
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                      1177
Query
          Sbjct
     12410
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                      12469
          GACGAGTTCTTCTGAG
    1178
                      1193
Query
```

```
12470
          GACGAGTTCTTCTGAG
                       12485
Sbjct
>qb|AY159031.1| Cloning vector pPLEX-4001, complete sequence
Length=12377
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
Query
     398
          ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                        457
          11242
          ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                        11301
Sbjct
Query
     458
          GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                        517
          11302
                                                        11361
Sbjct
     518
          577
Query
          Sbjct
     11362
          11421
     578
          CAGGACGAGGCAGCGGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                        637
Query
          CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
Sbjct
     11422
                                                        11481
Query
     638
          CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                        697
          11482
                                                        11541
          CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
Sbjct
     698
          GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                        757
Query
          11542
          GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                        11601
Sbjct
     758
          CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                        817
Query
          11602
                                                        11661
Sbjct
     818
          ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                        877
Query
          ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
     11662
                                                        11721
Sbjct
     878
          GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                        937
Query
          GAGCATCAGGGGCTCGCCGAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
     11722
                                                        11781
Sbjct
     938
          GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                        997
Query
          GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
Sbjct
     11782
                                                        11841
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
     998
                                                        1057
Query
          11842
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                        11901
Sbjct
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     1058
                                                        1117
Query
          11902
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                        11961
Sbjct
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Query
     1118
                                                        1177
          11962
                                                        12021
Sbjct
Query
     1178
          GACGAGTTCTTCTGAG
                       1193
          Sbjct
     12022
          GACGAGTTCTTCTGAG
                       12037
>qb|AY159029.1| Cloning vector pPLEX-501, complete sequence
Length=10858
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
          ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                        457
     398
Query
          Sbjct
     9723
          ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                        9782
```

```
458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     517
Query
         9783
                                                     9842
Sbjct
         518
                                                     577
Query
Sbjct
    9843
                                                     9902
    578
         CAGGACGAGGCAGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                     637
Query
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                     9962
Sbjct
    9903
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
Query
    638
                                                     697
         9963
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    10022
Sbjct
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                     757
Query
         10023
                                                     10082
Sbjct
    758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     817
Query
         10142
Sbjct
    10083
    818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                     877
Query
         10143
                                                    10202
Sbjct
    878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
Query
         10203
                                                     10262
Sbjct
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
    938
                                                     997
Query
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
Sbjct
    10263
                                                     10322
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     1057
Query
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
    10323
                                                     10382
Sbjct
    1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     1117
Query
         10383
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     10442
Sbjct
Query
    1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    1177
         10443
                                                     10502
Sbjct
Query
    1178
         GACGAGTTCTTCTGAG
                     1193
         1111111111111111
Sbjct
    10503
         GACGAGTTCTTCTGAG
                      10518
>gb|AY159020.1| Was Cloning vector pPLEX-505, complete sequence
Length=10862
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
    398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     457
Query
         9727
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                     9786
Sbjct
    458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     517
Query
         9787
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                     9846
Sbjct
         Query
    518
                                                     577
         Sbjct
    9847
                                                     9906
    578
         {\tt CAGGACGAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG}
                                                     637
Query
          CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
    9907
                                                     9966
Sbjct
                                                     697
Query
    638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGTTTTGGGCGAAGTGCCGGGGCAG
```

```
Sbjct
    9967
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                   10026
Query
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                   757
         10027
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                   10086
Sbjct
         \tt CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
    758
                                                   817
         10087
                                                   10146
Sbjct
    818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                   877
Query
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                   10206
    10147
Sbjct
Query
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                   937
    878
         Sbjct
    10207
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                   10266
    938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                   997
Query
         10326
    10267
Sbjct
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                   1057
Query
         10327
                                                   10386
Sbjct
    1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                   1117
Query
         10387
                                                   10446
Sbjct
    1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                   1177
Query
         10447
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                   10506
Sbjct
    1178
         GACGAGTTCTTCTGAG
                     1193
Query
         GACGAGTTCTTCTGAG
    10507
                     10522
Sbjct
>gb|AY048743.1|
           Template plasmid pKD4, complete sequence
Length=3267
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                   457
Query
        459
                                                   518
Sbjct
Query
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                   517
        519
                                                  578
Sbjct
    518
        577
Query
         579
                                                  638
Sbjct
Query
    578
        CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                   637
        Sbjct
    639
                                                  698
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                  697
Query
    638
        699
                                                   758
Sbjct
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                   757
Query
        759
Sbjct
                                                  818
Query
    758
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                  817
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                  878
Sbjct
    819
                                                  877
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
    818
Query
        879
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                  938
Sbjct
    878
        GAGCATCAGGGGCTCGCCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                  937
Query
```

```
998
Sbjct
     939
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                      997
Query
     938
         999
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                     1058
Sbjct
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     1057
Query
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
     1059
                                                     1118
Sbjct
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     1117
Query
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     1119
                                                     1178
Sbjct
Query
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                     1177
     1118
         Sbjct
     1179
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                     1238
         GACGAGTTCTTCTGAG
Query
     1178
                      1193
         GACGAGTTCTTCTGAG
     1239
Sbjct
                      1254
>gb|AY237648.1| Cloning vector pHR50, complete sequence
Length=11973
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                      457
Query
         3776
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                      3717
Sbjct
     458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                      517
Query
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
     3716
                                                     3657
Sbjct
         Query
     518
                                                     577
         3656
                                                      3597
Sbjct
Query
         CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                     637
     578
         3596
                                                     3537
Sbjct
     638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                     697
Query
         ĊŢĊĠĊĠŢŢĠŢĊĊĊŢĠĂĠĊĠĠĠĂĠĠĠĠĊŢĠĊŢĠĊŢĂŢŢĠĠĊĠĂĠŢĠĊĊĠĠĠĠĊĀĠ
                                                     3477
     3536
Sbjct
Query
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                      757
         3476
                                                     3417
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                     817
Query
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
     3416
                                                      3357
Sbjct
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                     877
Query
         3356
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                     3297
Sbjct
     878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
Query
         3296
                                                     3237
Sbjct
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
     938
                                                     997
Query
         3236
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                     3177
Sbjct
Query
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                     1057
         3176
                                                      3117
Sbjct
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     1117
Query
         Sbjct
     3116
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                      3057
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Query
    1118
                                                     1177
```

```
2997
     3056
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Sbjct
     1178
         GACGAGTTCTTCTGAG
                      1193
Query
         2996
         GACGAGTTCTTCTGAG
                      2981
Sbjct
>qb|AY237649.1| Cloning vector pHR3-km, complete sequence
Length=6762
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
                                                       457
     398
         \tt ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Query
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
     3776
                                                       3717
Sbjct
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
     458
                                                       517
         3716
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                       3657
Sbjct
         577
Query
     518
         3656
                                                       3597
Sbjct
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
Query
     578
                                                       637
         3596
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                       3537
Sbjct
     638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                       697
Query
         3477
Sbjct
     3536
Query
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                       757
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
     3476
                                                       3417
Sbjct
         758
                                                       817
Query
                                                       3357
Sbjct
     3416
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                       877
Query
         Sbjct
     3356
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                       3297
     878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
Query
                                                       937
         3296
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                       3237
Sbjct
     938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                       997
Query
         3236
                                                       3177
Sbjct
     998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                       1057
Query
         Sbjct
     3176
                                                       3117
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     1058
                                                       1117
Query
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     3116
                                                       3057
Sbjct
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Query
     1118
                                                       1177
         Sbjct
     3056
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                       2997
Query
         GACGAGTTCTTCTGAG
     1178
                      1193
         2996
         GACGAGTTCTTCTGAG
                      2981
Sbjct
>gb|AY265466.1| Shuttle vector pAM2770, complete sequence
Length=8384
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
Query 398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                       457
```

```
739
                                                  798
Sbjct
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  517
Query
        799
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  858
Sbjct
    518
        577
Query
        859
        918
Sbjct
        CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
    578
                                                  637
Query
        978
Sbjct
    919
    638
        \verb|CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGTTTTGGGCGAAGTGCCGGGGCAG|\\
                                                  697
Query
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
    979
                                                  1038
Sbjct
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                  757
Query
        1039
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                  1098
Sbjct
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
    758
                                                  817
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    1099
                                                  1158
Sbjct
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                  877
Query
    818
        1159
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                  1218
Sbjct
    878
        GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                  937
Query
        Sbjct
    1219
                                                  1278
Query
    938
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                  997
        GGCGÁGGÁTCTCGTCGTGÁCCCÁTGGCGÁTGCCTGCTTGCCGÁÁTATCÁTGGTGGÁÁÁAT
    1279
                                                  1338
Sbjct
        998
                                                  1057
Query
    1339
                                                  1398
Sbjct
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                  1117
Query
        Sbjct
    1399
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                  1458
        \verb|CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT|\\
    1118
Query
                                                  1177
         1459
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                  1518
Sbjct
    1178
        GACGAGTTCTTCTGAG
                    1193
Query
        1111111111111111
    1519
        GACGAGTTCTTCTGAG
                    1534
Sbjct
>gb|AF346624.1|AF346624 RAGE vector pRIG1, complete sequence
Length=6836
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
Query
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  457
    398
        Sbjct
    3847
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  3906
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
    458
                                                  517
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
    3907
                                                  3966
Sbjct
        577
    518
Query
        3967
        4026
Sbjct
Query
    578
        CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                  637
        Sbjct
    4027
                                                  4086
Query
    638
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                  697
```

```
4146
     4087
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
Sbjct
     698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                      757
Query
         4147
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                      4206
Sbjct
     758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                      817
Query
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
     4207
                                                      4266
Sbjct
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
     818
                                                      877
Query
         Sbjct
     4267
                                                      4326
     878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                      937
Query
         GÁGCÁTCÁGGGGCTCGCGCCÁGCCGÁÁCTGTTCGCCÁGGCTCÁÁGGCGCGCÁTGCCCGÁC
     4327
                                                      4386
Sbjct
Query
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                      997
     938
         4387
                                                      4446
Sbjct
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Query
     998
                                                      1057
         4447
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGCCGGACCGCTATCAGGAC
                                                      4506
Sbjct
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Query
     1058
                                                      1117
         4507
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                      4566
Sbjct
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                      1177
Query
         Sbjct
     4567
                                                      4626
Query
     1178
         GACGAGTTCTTCTGAG
                      1193
         4627
         GACGAGTTCTTCTGAG
                      4642
Sbjct
>emb|AL671256.1|TBN19B2 W Trypanosoma brucei VO2 VSG expression site BAC
Length=137759
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
Query
    398
          ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                        457
           Sbjct
     117684
          ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                        1177
          GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
     458
                                                        517
Query
           GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
     117744
                                                       1178
Sbjct
          577
     518
Query
           117804
          1178
Sbjct
          CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
Query
     578
                                                        637
          117864
                                                       1179
Sbjct
          CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                        697
Query
     638
          CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
     117924
                                                        1179
Sbjct
          GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                        757
Query
     698
           GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
Sbjct
     117984
                                                       1180
Query
     758
          CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                        817
           CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    118044
                                                        1181
Sbjct
     818
          ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                        877
Query
           ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
Sbjct
                                                        1181
```

```
Query
    878
          GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     937
          118164
          GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                     1182
Sbict
    938
          GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                     997
Query
          Sbjct
    118224
                                                     1182
    998
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCCGACCGCTATCAGGAC
                                                     1057
Query
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Sbjct
    118284
                                                     1183
    1058
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                     1117
Query
          118344
                                                     1184
Sbjct
    1118
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                     1177
Query
          118404
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                     1184
Sbjct
          GACGAGTTCTTCTGAG
    1178
                      1193
Query
          111111111111111
          GACGAGTTCTTCTGAG
    118464
                      118479
Sbjct
>gb|AF286462.1|AF286462 Promoter probe vector pPROBE'-gfp[LVA], complete sequenc
Length=7385
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                    457
Query
        6928
                                                    6869
Sbjct
                                                    517
Query
    458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
         Sbjct
    6868
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                    6809
Query
    518
         577
         6749
    6808
Sbjct
    578
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                    637
Query
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                    6689
Sbict
    6748
    638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    697
Query
        Sbjct
    6688
                                                    6629
    698
                                                    757
Query
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
    6628
                                                    6569
Sbjct
Query
    758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                    817
        6568
                                                    6509
Sbjct
    818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    877
Query
        6508
                                                    6449
Sbjct
    878
        GAGCATCAGGGGCTCGCCCCGACCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    937
Query
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
    6448
                                                    6389
Sbjct
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
Query
    938
                                                    997
         Sbjct
    6388
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    6329
Query
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                    1057
        6269
    6328
Sbjct
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    1117
Query
         6268
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    6209
Sbjct
```

```
1118
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                          1177
Query
          6208
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Sbict
                                                          6149
     1178
          GACGAGTTCTTCTGAG
                        1193
Query
          |||||||||||||||||||||||||||||||GACGAGTTCTTCTGAG
Sbjct
     6148
                        6133
>gb|AF286461.1|AF286461 Promoter probe vector pPROBE-gfp[LVA], complete sequence Length=7382
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
Query
     398
          ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                          457
          6925
          ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                          6866
Sbjct
          GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
     458
                                                          517
Query
          6865
          GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                          6806
Sbjct
          Query
     518
                                                          577
          6805
                                                          6746
Sbjct
Query
     578
          CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                          637
          6686
     6745
Sbjct
     638
          CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                          697
Query
          6685
                                                          6626
Sbjct
          GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
Query
     698
                                                          757
          Sbjct
     6625
          GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                          6566
Query
     758
          CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                          817
          CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                          6506
     6565
Sbjct
     818
          ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                          877
Query
          ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                          6446
Sbict
     6505
     878
          GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                          937
Query
          Sbjct
     6445
          GAGCATCAGGGGCTCGCCCCGACCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                          6386
                                                          997
Query
     938
          GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
          GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
     6385
                                                          6326
Sbjct
Query
     998
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                          1057
          6325
                                                          6266
Sbjct
     1058
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                          1117
Query
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                          6206
Sbjct
     6265
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                          1177
     1118
Query
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     6205
                                                          6146
Sbjct
Query
     1178
          GACGAGTTCTTCTGAG
          1111111111111111
Sbjct
     6145
          GACGAGTTCTTCTGAG
                        6130
>gb|AF286460.1|AF286460 Promoter probe vector pPROBE'-gfp[ASV], complete sequenc
Length=7385
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
```

```
Query
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  457
        6928
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  6869
Sbjct
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  517
Query
        6809
Sbjct
    6868
    518
        577
Query
        Sbjct
    6808
                                                  6749
    578
        CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                  637
Query
        6748
                                                  6689
Sbjct
Query
    638
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGTTTGGGCGAAGTGCCGGGGCAG
                                                  697
        6688
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                  6629
Sbjct
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                  757
Query
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
    6628
                                                  6569
Sbjct
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
    758
                                                  817
        6568
                                                  6509
Sbjct
Query
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                  877
        6508
                                                  6449
Sbjct
    878
        GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                  937
Query
        6448
                                                  6389
Sbjct
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                  997
Query
    938
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
    6388
                                                  6329
Sbjct
Query
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                  1057
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGTGTGGCGGACCGCTATCAGGAC
    6328
                                                  6269
Sbjct
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                  1117
Query
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                  6209
Sbict
    6268
    1118
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                  1177
Query
        Sbjct
    6208
                                                  6149
Query
    1178
        GACGAGTTCTTCTGAG
                    1193
        GACGAGTTCTTCTGAG
    6148
                    6133
Sbjct
>gb|AF286459.1|AF286459 Promoter probe vector pPROBE-gfp[ASV], complete sequence
Length=7382
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
                                                  457
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Query
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
    6925
                                                  6866
Sbjct
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
    458
        Sbjct
    6865
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  6806
Query
        518
                                                  577
        6805
                                                  6746
Sbjct
    578
        CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                  637
Query
        6745
        CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                  6686
Sbjct
```

```
638
Query
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    697
         6685
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    6626
Sbjct
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                    757
Query
        Sbjct
    6625
                                                    6566
         \tt CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    758
                                                    817
Query
         ĊĠĠĊĠĠĊŤĠĊĂŤĂĊĠĊŤŤĠĂŤĊĊĠĠĊŤĂĊĊŤĠĊĊĊĂŤŤĊĠĂĊĊĂĊĊĂĂĠĊĠĂĂĂĊĂŤĊĠĊ
Sbjct
    6565
                                                    6506
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    877
Query
        6505
                                                    6446
Sbjct
Query
    878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    937
         6445
        GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    6386
Sbjct
    938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    997
Query
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
    6385
                                                    6326
Sbjct
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                    1057
Query
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
    6325
                                                    6266
Sbjct
Query
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    1117
        6265
                                                    6206
Sbjct
    1118
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    1177
Query
        6205
                                                    6146
Sbjct
Query
    1178
         GACGAGTTCTTCTGAG
                     1193
         Sbjct
    6145
        GACGAGTTCTTCTGAG
                     6130
>gb|AF286458.1|AF286458 Promoter probe vector pPROBE'-gfp[AAV], complete sequenc
Length=7385
Score = 1471 bits (796),
                  Expect = 0.0
Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
    398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                    457
Query
        Sbjct
    6928
                                                    6869
Query
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                    517
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
    6868
                                                    6809
Sbjct
    518
         577
Query
        6808
                                                    6749
Sbjct
    578
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                    637
Query
        6748
                                                    6689
Sbjct
    638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    697
Query
         ĊŢĊĠĊĠŢŢĠŢĊĊĊŢĠĂĠĊĠĠĠĂĠĠĠĠĊŢĠĊŢĠĊŢĂŢŢĠĠĊĠĂĠŢĠĊĊĠĠĠĠĊĀĠ
    6688
                                                    6629
Sbjct
Query
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                    757
         Sbjct
    6628
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                    6569
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
    758
                                                    817
        6568
                                                    6509
Sbjct
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    877
Query
         6508
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    6449
Sbjct
```

```
Query
    878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    937
         6448
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    6389
Sbjct
    938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    997
Query
        6329
Sbjct
    6388
    998
                                                    1057
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Query
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Sbjct
    6328
                                                    6269
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    1117
Query
        6268
                                                    6209
Sbjct
    1118
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    1177
Query
         6208
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    6149
Sbjct
        GACGAGTTCTTCTGAG
    1178
                     1193
Query
         111111111111111
    6148
        GACGAGTTCTTCTGAG
                     6133
Sbjct
>gb|AF286457.1|AF286457 Promoter probe vector pPROBE-gfp[AAV], complete sequence
Length=7382
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                    457
Query
        6925
                                                    6866
Sbjct
                                                    517
Query
    458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
         Sbjct
    6865
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                    6806
Query
    518
         577
         6746
    6805
Sbjct
    578
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                    637
Query
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                    6686
Sbict
    6745
    638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    697
Query
        Sbjct
    6685
                                                    6626
    698
                                                    757
Query
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
    6625
                                                    6566
Sbjct
    758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                    817
Query
        6565
                                                    6506
Sbjct
    818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    877
Query
        6505
                                                    6446
Sbjct
    878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    937
Query
         GÁGCATCÁGGGGCTCGCGCCÁGCCGÁACTGTTCGCCÁGGCTCÁÁGGCGCGCÁTGCCCGÁC
    6445
                                                    6386
Sbjct
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    997
Query
    938
         Sbjct
    6385
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    6326
Query
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                    1057
        6325
                                                    6266
Sbjct
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    1117
Query
         6265
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    6206
Sbjct
```

```
1118
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                          1177
Query
          6205
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
Sbict
                                                          6146
     1178
          GACGAGTTCTTCTGAG
                       1193
Query
          |||||||||||||||||||||||||||||||GACGAGTTCTTCTGAG
                        6130
     6145
Sbjct
>gb|AF286456.1|AF286456 Promoter probe vector pPROBE'-gfp[tagless], complete seq Length=7343
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
Query
     398
          ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                          457
          6886
          ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                          6827
Sbjct
          GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
     458
                                                          517
Query
          6826
          GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                          6767
Sbjct
          Query
     518
                                                          577
          6766
                                                          6707
Sbjct
Query
     578
          CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                          637
          6706
                                                          6647
Sbjct
          \verb|CTCGACGTTGTCACTGAAGCGGGAAGGGGCTGCTATTGGGCGAAGTGCCGGGGCAG|\\
     638
                                                          697
Query
          6646
                                                          6587
Sbjct
          GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
Query
     698
          Sbjct
     6586
          GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                          6527
Query
     758
          CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                          817
          CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                          6467
     6526
Sbjct
     818
          ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                          877
Query
          ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                          6407
Sbict
     6466
     878
          GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                          937
Query
          Sbjct
     6406
                                                          6347
                                                          997
Query
     938
          GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
          GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
     6346
                                                          6287
Sbjct
Query
     998
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                          1057
          6286
                                                          6227
Sbjct
     1058
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                          1117
Query
          6226
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                          6167
Sbjct
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                          1177
     1118
Query
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     6166
                                                          6107
Sbjct
Query
     1178
          GACGAGTTCTTCTGAG
          1111111111111111
Sbjct
     6106
          GACGAGTTCTTCTGAG
                        6091
>gb|AF286455.1|AF286455 Promoter probe vector pPROBE-gfp[tagless], complete sequ
Length=7340
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
```

```
Query
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  457
        6883
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                  6824
Sbjct
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  517
Query
        6764
Sbjct
    6823
    518
        577
Query
        6763
        Sbjct
                                                  6704
    578
        CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                  637
Query
        6703
                                                  6644
Sbjct
    638
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGTTTGGGCGAAGTGCCGGGGCAG
                                                  697
Query
        6643
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                  6584
Sbjct
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                  757
Query
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
    6583
                                                  6524
Sbjct
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
    758
                                                  817
        6523
                                                  6464
Sbjct
Query
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                  877
        6463
                                                  6404
Sbjct
    878
        GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                  937
Query
        6403
                                                  6344
Sbjct
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                  997
Query
    938
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
Sbjct
    6343
                                                  6284
Query
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                  1057
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGTGTGGCGGACCGCTATCAGGAC
    6283
                                                  6224
Sbjct
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                  1117
Query
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
Sbict
    6223
                                                  6164
    1118
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                  1177
Query
        Sbjct
    6163
                                                  6104
Query
    1178
        GACGAGTTCTTCTGAG
                    1193
        GACGAGTTCTTCTGAG
    6103
                    6088
Sbjct
>gb|AF286454.1|AF286454 Promoter probe vector pPROBE-NT', complete sequence
Length=6810
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
                                                  457
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
Query
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
    6353
                                                  6294
Sbjct
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
Query
    458
        Sbjct
    6293
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                  6234
Query
        577
    518
        6174
    6233
Sbjct
    578
        CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                  637
Query
        6173
        CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                  6114
Sbjct
```

```
638
Query
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    697
         6113
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    6054
Sbjct
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                    757
Query
        6053
                                                    5994
Sbjct
         \tt CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    758
                                                    817
Query
         5993
        ĊĠĠĊĠĠĊŤĠĊĂŤĂĊĠĊŤŤĠĂŤĊĊĠĠĊŤĂĊĊŤĠĊĊĊĂŤŤĊĠĂĊĊĂĊĊĂĂĠĊĠĂĂĂĊĂŤĊĠĊ
Sbjct
                                                    5934
Query
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    877
        5933
                                                    5874
Sbjct
    878
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    937
Query
         5873
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    5814
Sbjct
    938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    997
Query
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
    5813
                                                    5754
Sbjct
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Query
    998
                                                    1057
        5753
                                                    5694
Sbjct
Query
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    1117
        5693
                                                    5634
Sbjct
    1118
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    1177
Query
        5633
                                                    5574
Sbjct
Query
    1178
         GACGAGTTCTTCTGAG
                     1193
         Sbjct
    5573
        GACGAGTTCTTCTGAG
                     5558
>gb|AF286453.1|AF286453 Promoter probe vector pPROBE-NT, complete sequence
Length=6807
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
    398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                    457
Query
        Sbjct
    6350
                                                    6291
                                                    517
Query
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
        6290
                                                    6231
Sbjct
    518
         577
Query
        6230
                                                    6171
Sbjct
    578
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                    637
Query
        6170
                                                    6111
Sbjct
    638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    697
Query
         ĊŢĊĠĊĠŢŢĠŢĊĊĊŢĠĂĠĊĠĠĠĂĠĠĠĠĊŢĠĊŢĠĊŢĂŢŢĠĠĊĠĂĠŢĠĊĊĠĠĠĠĊĀĠ
    6110
                                                    6051
Sbjct
Query
    698
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                    757
         Sbjct
    6050
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                    5991
Query
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    758
                                                    817
        5990
                                                    5931
Sbjct
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    877
Query
         5930
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                    5871
Sbjct
```

```
878
Query
        GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                   937
         GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                   5811
Sbjct
    5870
    938
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                   997
Query
        5751
Sbjct
    5810
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                   1057
Query
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
Sbjct
    5750
                                                   5691
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                   1117
Query
        5690
                                                   5631
Sbjct
Query
    1118
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                   1177
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
    5630
                                                   5571
Sbjct
        GACGAGTTCTTCTGAG
    1178
                     1193
Query
         GACGAGTTCTTCTGAG
    5570
                     5555
Sbjct
>gb|AY962288.1| Low threshold vector pLTSUB-302, complete sequence
Length=4719
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                   457
Query
        3103
                                                   3162
Sbjct
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                   517
Query
    458
         Sbjct
    3163
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                   3222
Query
    518
        577
         3282
    3223
Sbjct
    578
        CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                   637
Query
         CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
                                                   3342
Sbict
    3283
    638
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                   697
Query
        Sbjct
    3343
                                                   3402
    698
                                                   757
Query
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
    3403
                                                   3462
Sbjct
    758
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                   817
Query
        3463
                                                   3522
Sbjct
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                   877
Query
        3582
Sbjct
    3523
    878
        GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                   937
Query
         GÁGCÁTCÁGGGGCTCGCGCCÁGCCGAACTGTTCGCCÁGGCTCAÁGGCGCGCÁTGCCCGÁC
    3583
                                                   3642
Sbjct
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
Query
    938
                                                   997
         Sbjct
    3643
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                   3702
Query
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                   1057
        3703
                                                   3762
Sbjct
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                   1117
Query
         3763
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                   3822
Sbjct
```

```
Query
     1118
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                         1177
          3823
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                         3882
Sbjct
     1178
         GACGAGTTCTTCTGAG
                       1193
Query
         |||||||||||||||||||||||||||||||GACGAGTTCTTCTGAG
     3883
                       3898
Sbjct
>gb|AY952935.1| Expression vector pFNK-101, complete sequence
Léngth=4099
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
Query
     398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                         457
          4020
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                         3961
Sbjct
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
     458
                                                         517
Query
          3960
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                         3901
Sbjct
          577
Query
     518
         3900
                                                         3841
Sbjct
Query
     578
          CAGGACGAGGCAGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                         637
         3840
                                                         3781
Sbjct
     638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                         697
Query
         3721
     3780
Sbjct
     698
          GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                         757
Query
          GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
Sbjct
     3720
                                                         3661
          \tt CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
     758
                                                         817
          CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
     3660
                                                         3601
Sbjct
     818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                         877
Query
          ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                         3541
Sbict
     3600
     878
          GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                         937
Query
         Sbjct
     3540
                                                         3481
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                         997
Query
     938
          GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
     3480
                                                         3421
Sbjct
Query
     998
          GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                         1057
         3420
                                                         3361
Sbjct
     1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                         1117
Query
          ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
     3360
                                                         3301
Sbjct
         \tt CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                         1177
     1118
Query
          CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
     3300
                                                         3241
Sbjct
Query
     1178
         GACGAGTTCTTCTGAG
          1111111111111111
         GACGAGTTCTTCTGAG
Sbjct
     3240
                       3225
>gb|AY952936.1|
            Expression vector pINV-110, complete sequence
Length=4887
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
```

```
Query
    398
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                 457
        4751
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                 4692
Sbjct
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                 517
Query
        4691
                                                 4632
Sbjct
        518
                                                 577
Query
        Sbjct
    4631
                                                 4572
Query
    578
        CAGGACGAGGCAGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                 637
        4571
                                                 4512
Sbjct
    638
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGTTTGGGCGAAGTGCCGGGGCAG
                                                 697
Query
        4511
        CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                 4452
Sbjct
    698
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
                                                 757
Query
        GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
    4451
                                                 4392
Sbjct
        CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
    758
                                                 817
        4391
                                                 4332
Sbjct
Query
    818
        ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
                                                 877
        4272
    4331
Sbjct
        878
                                                 937
Query
                                                 4212
    4271
Sbjct
    938
        GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                 997
Query
        Sbjct
    4211
                                                 4152
Query
    998
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                 1057
        GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                 4092
    4151
Sbjct
    1058
        ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                 1117
Query
        4091
                                                 4032
Sbjct
    1118
        CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                 1177
Query
        Sbjct
    4031
                                                 3972
Query
    1178
        GACGAGTTCTTCTGAG
                    1193
        ||||||||||||||||||||||||||||||||GACGAGTTCTTCTGAG
Sbjct
    3971
                    3956
>gb|DQ225747.1| MGene trapping Ds/T-DNA vector pUR224NB, complete sequence
Length=22828
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Plus
        ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                 457
Query
    398
        4659
                                                 4718
Sbjct
    458
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                 517
Query
        GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
    4719
                                                 4778
Sbjct
Query
        577
    518
        Sbjct
    4779
                                                 4838
Query
    578
        CAGGACGAGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
                                                 637
        4898
    4839
Sbjct
```

```
638
                                                    697
Query
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAG
         4899
                                                    4958
Sbjct
        Query
    698
                                                    757
    4959
                                                    5018
Sbjct
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
                                                    817
Query
    758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Sbjct
    5019
                                                    5078
    818
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
Query
                                                    877
         ATCGÁGCGÁGCÁCGTÁCTCGGÁTGGÁÁGCCGGTCTTGTCGÁTCÁGGÁTGÁTCTGGÁCGÁÁ
    5079
                                                    5138
Sbjct
    878
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
                                                    937
Query
         GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC
    5139
                                                    5198
Sbjct
    938
         GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT
                                                    997
Query
         5258
Sbjct
    5199
    998
         GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
                                                    1057
Query
         5259
                                                    5318
Sbjct
    1058
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
                                                    1117
Query
         ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
    5319
                                                    5378
Sbjct
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
    1118
                                                    1177
Query
         Sbjct
    5379
         CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT
                                                    5438
         GACGAGTTCTTCTGAG
                     1193
Query
    1178
         1111111111111111
    5439
         GACGAGTTCTTCTGAG
                     5454
Sbjct
>gb|DQ225746.1| MGene trapping Ds/T-DNA vector pUR224NA, complete sequence
Length=22828
Score = 1471 bits (796), Expect = 0.0 Identities = 796/796 (100%), Gaps = 0/796 (0%)
Strand=Plus/Minus
Query
    398
         ATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTC
                                                    457
         8509
                                                    8450
Sbjct
    458
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                    517
Query
         8449
         GGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCA
                                                    8390
Sbjct
    518
         577
Query
         8330
Sbjct
    8389
                                                    637
    578
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTG
Query
         CAGGACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
    8329
                                                    8270
Sbjct
    638
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    697
Query
         8269
         CTCGACGTTGTCACTGAAGCGGGAAGGGACTGCTGCTATTGGGCGAAGTGCCGGGGCAG
                                                    8210
Sbjct
         GATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATG
    698
                                                    757
Query
         Sbjct
    8209
                                                    8150
    758
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
Query
                                                    817
         CGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGC
    8149
                                                    8090
Sbjct
    818
Query
         ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
```

Sbjct	8089	ATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA	8030
Query	878	GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC	937
Sbjct	8029	GAGCATCAGGGGCTCGCCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGAC	7970
Query	938	GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT	997
Sbjct	7969	GGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAAT	7910
Query	998	GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCCGACCGCTATCAGGAC	1057
Sbjct	7909	GGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCCGACCGCTATCAGGAC	7850
Query	1058	ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC	1117
Sbjct	7849	ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC	7790
Query	1118	CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT	1177
Sbjct	7789	CTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTT	7730
Query	1178	GACGAGTTCTTCTGAG 1193	
Sbjct	7729	GACGAGTTCTTCTGAG 7714	

Select All Get selected sequences Distance tree of results